#### PROJECT REPORT (17MBAPR407)

**ON** 

## "A STUDY ON OPERATING COST MANAGEMENT AT BANGALORE METROPOLITAN TRANSPORT CORPORATION"

BY

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Submitted to

#### VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI



In partial fulfilment of the requirements for the award of the degree of

#### MASTER OF BUSINESS ADMINISTRATION

*Under the guidance of* 

INTERNAL GUIDE MAHAK BALANI ASSISTANT PROFESSOR DEPARTMENT OF MBA AIT, BENGALURU EXTERNAL GUIDE MONNAPPA, ACCOUNT.SUPTD BMTC, BENGALURU



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March 2019

### ಬೆಂಗಳೂರು ಮಹಾನಗರ ಸಾಲಿಗೆ ಸಂಸ್ಥ ಕೇಂದ್ರ ಕಛೇಠಿ : ಬೆಂಗಳೂರು

BENGALURU METROPOLITAN TRANSPORT CORPORATION

HUMAN RESOURCE DEVELOPMENT DEPARTMENT

No: BMTC: CO: HRD: 131 / 2018-19

Date: 2) /08/2018



#### <u>CERTIFICATE</u>

This is to certify that Mr. Madhu S (Reg. No. 1AY17MBA24) student of MBA, Acharya Institute of Technology; Bengaluru has successfully completed the project work on the title "A study on Operating Cost Management at BMTC" from 03/01/2019 to 16/02/2019, at Bengaluru Metropolitan Transport Corporation.

The Corporation wishes him a bright future.

Place: Bengaluru

Chief Personnel Manager (HRD)

B.M.T.C.
Head of the Department
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(Affiliated to Visvesvaraya Technological University, Belagavi, Approved by AICTE, New Delhi and Accredited by NBA and NAAC)

Date: 04/04/2019

#### **CERTIFICATE**

This is to certify that Mr. Madhu S bearing USN 1AY17MBA24 is a bonafide student of Master of Business Administration course of the Institute 2017-19 batch, affiliated to Visvesvaraya Technological University, Belgaum. Project report on "A Study on Operating Cost Management at BMTC, Bangalore" is prepared by him under the guidance of Prof. Mahak Balani, in partial fulfillment of the requirements for the award of the degree of Master of Business Administration, Visvesvaraya Technological University, Belagavi, Karnataka.

Signature of Internal Guide

Signature of HOD

Head of the Department Department of MBA

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Signature of Principal/Dean Academics

Dr. Devarajaiah R.M.
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**DECLARATION** 

I, Madhu S, hereby declare that the project report entitled "A Study on Operating

Cost Management" with reference to "Bangalore Metropolitan Corporation

Transport" prepared by me under the guidance of Prof. Mahak Balani, Assistant

Professor, Department of Management Studies, Acharya Institute of Technology,

Soldevanahalli and external assistance by Monnappa, Account Superintendent,

**BMTC.** I also declare that this Project work is towards the partial fulfilment of the

university Regulations for the award of degree of Master of Business

Administration by Visvesvaraya Technological University, Belagavi. I have

undergone a summer project for a period of six 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: Bong lore

Date 11-4-2019

Macher S Signature of the student

**ACKNOWLEDGEMENTS** 

I deem it a privilege to thank our Principal Dr. Prakash M R, Dr. Devarajaiah R M, Dean

Academics and thanks to **Dr. M.M Bagali**, HOD, Department of MBA, for having giving me

the opportunity to do the project, which has been a very valuable learning experience.

I am truly grateful to my External guide Monnappa, Account Superintendent, BMTC

Bangalore and my Internal guide Mrs. Mahak Balani for their research guidance,

encouragement and opportunities provided.

I wish to thank all the respondents from the firms who spent their valuable time in discussing

with me and giving valuable data by filling up the questionnaire.

My sincere and heartfelt thanks to all my teachers at the department of MBA, Acharya

Institute of Technology for their valuable support and guidance.

Last, but not least, I want to express my deep appreciation to my parents for their unstinted

support.

Place: Bengaluru

Madhu S

Date:

**USN: 1AY17MBA24** 

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#### **EXECUTIVE SUMMARY**

As incomplete satisfaction of MBA I was required to undergo project for 6 weeks. As for that this I have arranged this project report on "A study on Operating Cost Management" attempted at BMTC in Bangalore.

This research is done with regards to the successful completion of MBA with specialization in finance. Hence this research is rooted to enlighten the student in the area of research. This research is done with co-operation of Bangalore Metropolitan Transport Corporation and the research is the conducted in topic of Operating cost. This project is regarding the topic operating cost study done in BMTC a Bangalore. It is conducted purely in expectation that the student's will attain an insight and have a critically exposure about the industry.

## CHAPTER:-1 INTRODUCTION

#### 1. INTRODUCTION

#### 1.1 INTRODUCTION ABOUT THE PROJECT

This research is done with regards to the successful completion of MBA with specialization in finance. Hence this research is rooted to enlighten the student in the area of research. This research is done with the cooperation of Bangalore Metropolitan Transport Corporation and the research is conducted in area of Operation Cost. The project is titled as "A Study on Operating Cost Management at BMTC, Bangalore". It is conducted purely in expectation that the students will attain an insight and have a critically about the industry.

Project stands beneficial as it teaches the students the facts about the practical knowledge attained and the theoretical knowledge they have learned.

The Project has been carried out over a period of 6 weeks. The project is undertaken so that the students will have greater business insight & exposure of real time corporate world. It gives a base for students to enrich the skills and knowledge required to compete with the external world.

#### 1.2 TOPIC CHOSEN FOR THE STUDY

"A STUDY ON OPERATING COST MANAGEMENT IN BANGALORE METROPOLITAN TRANSPORT CORPORATION"

#### 1.3 INDUSTRY PROFILE

#### 1.3.1 INTRODUCTION TO THE INDUSTRY

The transportation business is worldwide in nature and its development has been expanded by the determination of new advances that permit time particular and electronic following of the payload. 2/5 of new occupations ought to be for truck drivers and deals specialists. Transportation and material moving occupations which include workers and hand cargo stack and material movers has been expanded by more than 848,000 new employments somewhere around 2004 and 2018.

In India Road Transport administration are controlled both Government and Private segment. Be that as it may in the trek of passenger movement has prompted sharp rivalry among the private offices and individuals were not able duplicate up with the costs changed by them. Another explanation behind the foundation of open transportation framework was populace which has outside the ability of private to control.

#### 1.3.2 PUBLIC TRASPORTATION

Transportation is one of the general public's non-distinguishable part. It decides the closer relationship style of the human life and the utilization reasons merchandise and administrations that are accessible. Transportation has changed the conduct of living and different viewpoints in the general public and suggests sway on the human advancement improvement. In advanced society the significance of transportation is confirmed. Transportation is a non-detachable part of any general public. It demonstrates an exceptionally sound connection to the style of life the extent and area of operations and the administrations and merchandise that are accessible for utilization. Propels in transportation has rolled out attainable improvements in the lifestyle and the path in which social orders are very much required and in this manner generally affect the advancement of developments. This passes on a comprehension of the significance of transportations in the present day society.

#### 1.3.3 ECONOMIC SIGNIFICANCE OF TRANSPORTATION

Financial importance required creation, circulation and merchandise for utilization. Individuals as a rule rely on upon the normal assets for their way of life yet because of shortage of characteristic assets individuals won't get the same measure of common assets in equivalent amounts and the way of life of the general population contrasts. Transport consistent the scope of wellsprings of supply of merchandise to be used in a region, making it feasible for client to get assets at modest cost and better quality. The utilization of more effective arrangement of supply results in an incorporate generation, dispersion and use of merchandise and administrations. Individuals approach the regular assets to satisfy the requirements of life yet because of non-uniform surface of earth and because of changed in neighbourhood assets there is a colossal of contrast in way of life in various social orders. So there is a monstrous necessity of transportation of assets from one of the specific culture to other. These assets can extent from material things to aptitudes and learning like movement of experts and specialists to the spots where there is need of them.

#### 1.3.4 TRANSPORTATION IN INDIA

Transportation in the republic of India is major part of the country financial service. Considering the monetary advance of 1990 improvement inside of country has advances at a quick pace and today there is a wide assortment of methods of transportation via area water and air. Nonetheless, the generally low GDP of India has suggested that passage to these methods of transport has not been same. Motor vehicle infiltration is low with just 13 million vehicles on the nation's streets. Moreover it just approximates 10% of Indian family unit possess cruiser.

In India Road Transport administrations are worked both by open and private areas. In any case fast expand introspect of traveller activity has prompted sharp rivalry among the private offices and individuals were not able duplicate up with the costs changed by them. A large portion of the general population then began utilization open transportation as opposed to private ones.

Another purpose behind the foundation of open transportation framework was developing populace, which was outside the ability to control of private organization. Bangalore being in of the metropolitan urban communities it is straight foreword the quantity of populace and the

interest foe more transportation offices therefore Bangalore Corporation undertaking development and BMTC is one. Transport in the republic of India is a critical part of the Indian economy. Since the monetary liberalization of the 1990 improvement of foundation in the India has advanced at a sudden place and today there is a large assortment of techniques of transport via area air and water. Nonetheless the moderately low GDP of India has under that entrance to these methods of transport has not been uniform. Engine vehicle entrance is low with just 18 million autos on the India's streets. Furthermore just approximate 15% of Indian family units claim a cruiser. In the meantime the automobile business in India is suddenly growing with a yearly era of more than 2.6 million motor vehicles and motor vehicle level is relied upon to rise essentially later on.

In the meantime be that as it may public transport still remains the crucial method of transport for most by far of the people and India's public transport system are among the generally strongly as a part of the international transporting more than 8 million travellers and more than 4560 million tons of freight each year.

Notwithstanding ongoing improvements in the division a less parts of the motor vehicle area are filled with problem because of out of date base absence of venture debasement and a developing populace. The enthusiasm of transportation foundation and management has been climbing by around 15% a year with the present base being notable attain these growth requests. As pointed by late gauges by Goldman sachs Indian economy should increase through US\$ 1.7 Trillion on structure ventures all the following 10 years to support fiscal advancement of which US\$ 500 Billion is planned to be spent amid the eleventh 5 year arrangement.

#### 1.3.5 HISTORY OF ROAD TRANSPORTATION

In antiquated times, individuals secured and strolled long separations by running. After palanquins came into presences which were one of the extravagant strategies utilized by the aristocrats and rich for voyaging. This is basically utilized as a part of the previous to convey a symbol or divinity of a divine numerous sanctuaries and being have figures of god being conveyed in palanquins. After on, it was basically utilized by woman and European aristocrat from the privileged societies of society before the approach of the railroads in India.

Another bullock trucks are customarily utilized for transport, particularly in provincial India. The entry of the British Saw Extraordinary changes in the stallion carriages which are utilized for transport subsequent to ahead of allocated days. Now days, they are utilized as a portion of littler towns and alluded as Tonga or carriages.

Little engine vehicles, auto rickshaws, cycle rickshaws, hand pulled rickshaws and so on came into existence. At before it has prompted other incredible innovations like super autos, bus, trains and so on.

#### 1.3.6 SIGNIFICANCE OF ROAD PASSENGER TRANSPORTATION

Most urban areas of the nation offer some kind of transport administration to their villages. This administration was particularly vital in urban areas that don't offer mass travel administration. More sparing than taxi and bus administration can provide pretty much as individual consideration as taxi vehicle in light of the fact that moat transport drivers takes after a committed course which empowers client to be knowledgeable.

A committed transport administration is an important piece of outline work and peopling get to, recreational occasions and school, giving numerous individuals the capacity to move crosswise over town and nations over.

The general population transport administration gives clean and protected transportation with security highlights like floor light and safety belts. At time there is the comfort and plight transport administration can provide.

#### 1.3.7 INDIAN TRANSPORT SYSTEM

In India Road Transport administrations are worked both by open and private parts. In any case, immediate build introspect of traveller activity has prompted sharp rivalry among the private offices and individuals are not able duplicate up with the costs changed by them. A huge portion of the general population then starting utilizing open transportation as opposed to private transport administrations.

Another purpose behind the foundation of open transportation blueprint was developing populace, which was outside the ability to control of private one. Bangalore being one of the metropolitan urban areas it is straightforward the interest and the quantity of populace for

more transportation offices, accordingly Bangalore Corporation Undertaking B.M.T.C and rose is one of them.

#### 1.4 NATURE OF BUSINESS CARRIED

BMTC's mission has been definitely and unmistakably put forward "To give Efficient, reliable, safe and punctual administration to the workers of urban and suburban ranges of Bangalore", the quick developing hub and universal destination.

It is a matter of delight that BMTC has understood this mission to a vast degree and has lived up the trust rested in it by both the general population and govt., cutting a corner for itself in the general population life of Bangalore life of Bangalore. It will be embellishment to say that without it, the city would miss a pulse. Its commitment has been not a little in the circle of the economy as well. Throughout the years, it has wheels of financial advancement of Bangalore and the state.

Today it is the main benefit making open segment urban transport company with no collection misfortunes in the Indian. Its profits are furrowed back to enhance the nature of spare fuel and administration, straightforwardness activity blockage and contain contamination.

#### 1.5 COMPANY PROFILE

#### 1.5.1 HISTORYOF B.M.T.C

Bangalore Metropolitan Transport Corporation was shaped as an independent company with impact from 15-08-1997 after segmentation from Karnataka State Road Transportation Corporation (KSRTC) vide GO No TRA/96/HTC/127 period of 17-08-1997in which it comprised of two segment headed by Director (B.T.S) Since 1993. Before that since 1961 it was under controlled by KSRTC/MSRTC.

It is a greatest open city transport partnership in India. It is prestigious open part transport undertaking claimed by the State of Karnataka and administered by a Board of Directors delegated by the state.

BMTC is giving the most moderate and tried true transport administration since years to the general population in and around Bangalore city. With its compelling arrangements and effective collaboration it can meet the developing needs of the expanding number of voyagers and growing city limits. Transportation is the ago a misfortune making open part association. Today it is the main open division transport company that are making benefits. It is recognizing so as to succeed and adjusting to the adjustments in innovations needs tastes and inclinations of the general population and serving to the best.

The prime target of B.M.T.C is to give reasonable monetary productive and eco and worker agreeable transport framework to the nationals of Bangalore. It has stated numerous formative software engineers for the welfare of workers and the general public. With the backing of administration of Karnataka and legislature of India under the Jawaharlal Nehru National Urban Renewal mission, (Jn-NURM) it has turned out with a dream arrangement 2005-2010 for the advancement of urban transport foundation administration levels and fortifying Human Resources.

#### 1.5.2 BMTC Company logo

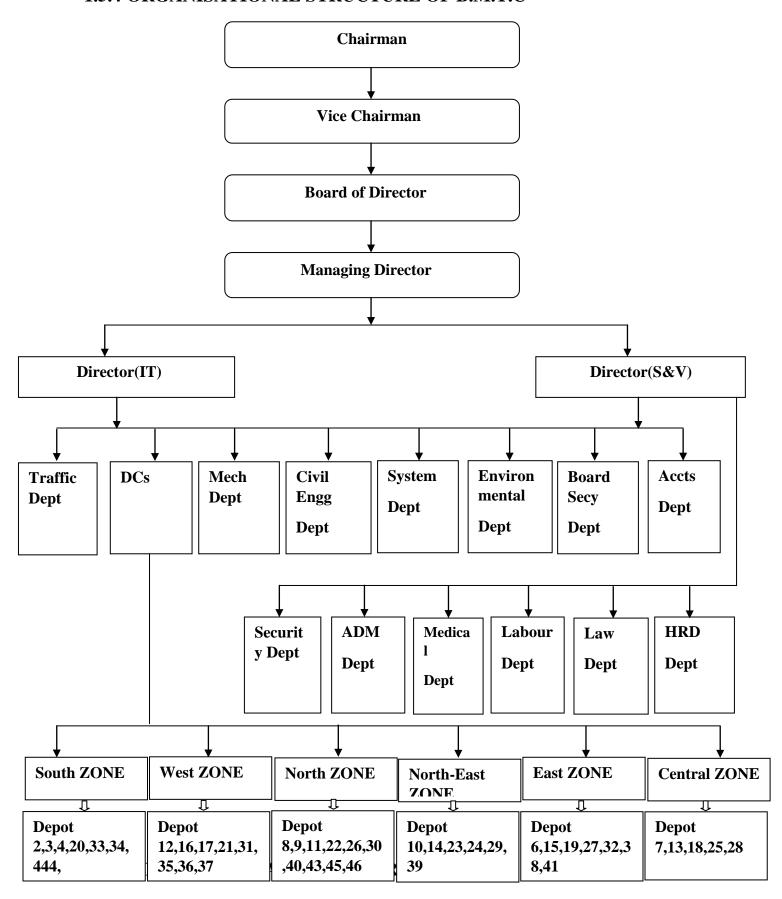
The BMTC started 1997 since 14 years used the Logo under



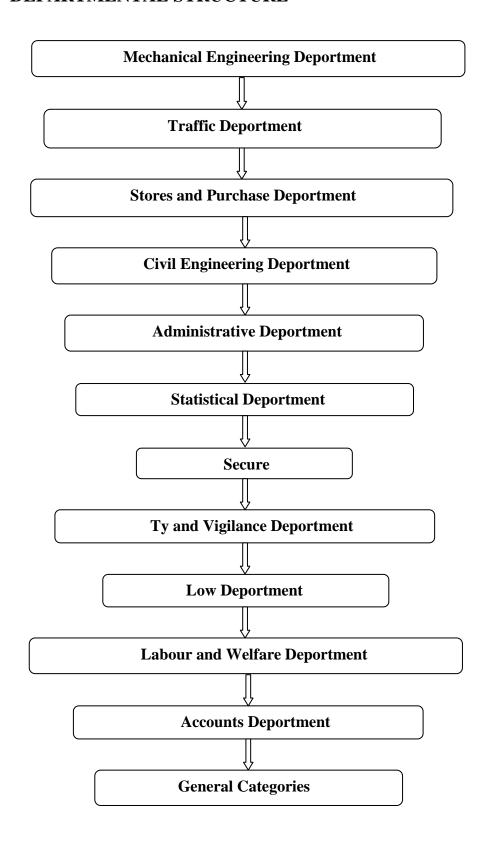
#### 1.5.3 FACILITIES AT BMTC BUS STATION

- a. In one roof all transport facilities is given.
- **b.** High-Tech Bus stations
- c. Drinking water facilities
- d. Seating arrangements
- e. Toilets facilities
- f. Canteen facilities
- g. Pre-paid taxi and auto
- **h.** The ATM facilities
- i. Parking area facilities
- j. Digital Display
- k. Intelligent Transport System
- **l.** Public addressing system
- m. Commercial establishment and offices
- **n.** Rest room
- o. Lighting facilities

#### 1.5.4 ORGANISATIONAL STRUCTURE OF B.M.T.C



#### 1.5.5 DEPARTMENTAL STRUCTURE



#### 1.5 VISION, MISSION AND GOALS

**Vision-** "To provide word class transport services to the citizens of Bangalore Metropolitan Area."

Mission- "To provide safe affordable eco-friendly bus services."

**Goals-** "To provide services to people all over Karnataka. And also to provide better facilities then what provide companies demand."

#### 1.7 ACHIVEMENTS AND REWARDS

- B.M.T.C has won the trees as All India honours 2 times for its K.M.P.L tire execution.
- Golden peacock special tribute certificate for the year 2005.
- Transports Minister Trophy issued in 2004-05 that exceptional most minimal mischance rate in the urban class. This was issued by service of delivery Road Transport and Highways Government of India.
- ASRTU Award for least operational expenses.
- Perfection in urban transport established by the service for Urban Development in Dec-2010.
- In 2012 The HUDCO NATIONAL AWARD was issued.

#### 1.8 PRODUCTS AND SERVICES OF B.M.T.C

#### 1. Sub Urban Main Busses

Presented by sub urban main busses administrations to give offices to the sub urban zones and far away towns.

#### 2. Ring Road Services

They propelled Ring Road administrations on the external and internal Ring Road interfacing workers from North to South and East to West.

The administration was given on like clockwork on the external Ring street and 20 minutes on the inward ring street amid top hours.

#### 3. Account Busses

Account busses were acquainted from chose focuses with Kempegowda Bus Station 40 minutes recurrence both morning and night.

#### 4. Night Services

Initiated Night Services to give transport administrations to workers venturing out from Kempegowda station to various neighbourhoods amid late and early morning. These administrations work 1 hour recurrence.

#### 5. Metro Bus Services

The partnership presented two pilot Metro Bus Services from Hebbal to JP Nagar sixth stage and from Jeevanbhimanagar to Annapoorneshwari.

#### A. DIFFERENT TYPES OF BMTC BUS'S

#### (VOLVO)



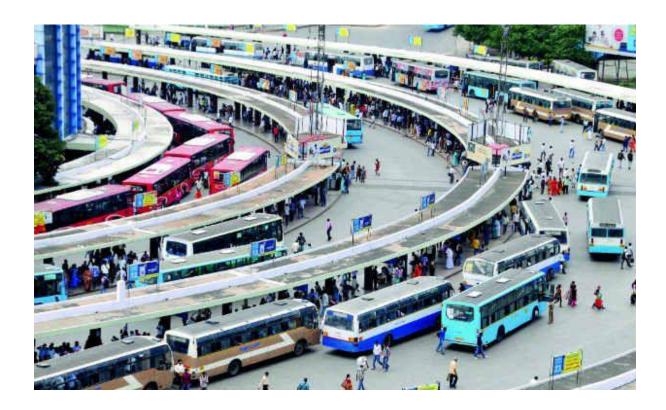
#### (SUVARNA)



#### (VAJRA)



#### **B. BMTC BUS STATIONS**



#### 1.8 AREAS OF OPERATIONS

The Bangalore Metropolitan Transport Corporations (B.M.T.C) has been setting up a noteworthy execution since it appeared in 1997. After its bifurcation from the guardian Karnataka State Road Transport Corporations (K.S.R.T.C). In 2012-2013 the year under report was the same. To meet the difficulties of the developing needs of the voyaging open in the state, Government of Karnataka issued a while paper on Compelling Transport Management initiatives for execution in the Transport part of Karnataka. These Effective Transport Management initiatives contain 4 distinct activates which are recorded.

- 1. The public relations are initiating the effectiveness of the transport management.
- 2. Initiating effectiveness as utilized innovative technologies.
- 3. Management should taken initiatives for controlling the contamination for air.
- 4. Management was certain initiatives for road safety and transport.

#### 1.9 INFRATRUCTURE FACILITIES

The B.M.T.C includes 37 depot units that is given below.

#### **Infrastructure of B.M.T.C- Depots and Locations**

SL. NO	Locations	Depots
1	Shanthinagar	DEPOT -1
2	Shanthinagar	DEPOT -2
3	Jayanagar	DEPOT -3
4	Shivajinagar	DEPOT -4
5	Vijayanagar	DEPOT -5
6	Indhiranagr	DEPOT -6
7	Subashnagar	DEPOT -7
8	Yashvanthpur	DEPOT -8
9	Pennya 1 <sup>st</sup> stage	DEPOT -9
10	Hennurbanasavadi	DEPOT -10

·	·	
11	Yalahanka	DEPOT-11
12	Kengeri	DEPOT -12
13	Banashankari	DEPOT -13
14	R T nagar	DEPOT -14
15	Koramangala	DEPOT -15
16	Deepanjalinagar	DEPOT -16
17	Chandhra layout	DEPOT -17
18	ITPL	DEPOT -18
19	Electranic city	DEPOT -19
20	Rajarajeshvarinagar	DEPOT -20
21	Peeny 2 <sup>nd</sup> stage	DEPOT -21
22	Kalyanagar	DEPOT -22
23	K R puram	DEPOT -23
24	HSR layout	DEPOT -24

25	Yashvanthapur 2	DEPOT -25
26	Jigani	DEPOT -26
27	Hebbala	DEPOT -27
28	K R pura 2	DEPOT -28
29	Yalahanka 2	DEPOT -29
30	Srigandhadhakavalu	DEPOT -30
31	Surya city	DEPOT -31
32	Poornapragna layout	DEPOT -32
33	Kothannurdinne	DEPOT -33
34	kannalli	DEPOT -34
35	Bidadi	DEPOT -35
36	Ckikkanamangala	DEPOT -36
37	Hoskote	DEPOT -37

#### 1.10 COMPETITORS OF B.M.T.C

A public transportation is a fundamental instrument for any general public for the travel. And also government needs to deal with such open transportation administrations offices. BM.T.C is pretty much like syndication in the business sector reason being the private transport suppliers are less in number and are not proficient in the business sector.

For the monopolistic state in the business sector today B.M.T.C has its own agency for it. Right from the fuse in 1940 when the legislature of Mysore assumed control over the organization and blended it with Mysore state transport partnership with only 99 transport naming it as Bangalore Transport Service (B.T.S).

#### 1.11 SWOT ANALYSIS

#### **Strengths:**

- The BMTC is use of standard qulity materials to get standard quality output.
- It has also trained and skilled Labour force to support the infrastructure and cater the needs of transport services.
- Working network of the workers is very fast.
- Encouraging the employees and providing award for their good performance of work.

#### Weaknesses:

- Absenteeism on the side drivers.
- Quarrels and strikes that happen something from workers side.
- Amendment of the several nationalized schemes by the government to allow operations of services by private operators.
- Changing technology in this sector is a necessarily more than luxury, if the worker fail to adopt the change in technology it will be a big blow to company.
- Accident made by the drivers.

#### **Opportunities:**

- Establishing new Bus Stations Depots at various places.
- Increase service as per need.
- Value addition to travelling public.

• Computerizing for better services of the entire department.

#### **Threats:**

- Cost of lubricants and fuel is increasing.
- Non-implementation of modern technology.

#### 1.12 FUTURE PLANS OF B.M.T.C

B.M.T.C being a part and parcel of central procedures exercises all source of activities that helps in meeting these targets that comes under the urban transport facilities. The enterprise has raised up certain programs that gradually help in its development and those are listed give below.

- Correspondence is being made with the BDA and other neighbourhood designers to make accessible locales for the workers of the company.
- A advising framework has been acquainted with the workers kids on the promise of the instructive capability for landing position opportunities.
- A plan of well being is riches to acquainting with the advantage of the workers their relatives.
- Arrangements have been made to build two number of works welfare focuses at south and north in Bangalore city.

#### 1.13 FINANCIAL STATEMENT

The corporate has noticed a critical change on the budgetary execution. During the specified years the respective reports have been studied and properly understood.

## **Bangalore Metropolitan Transport Corporation Profit and Loss of 2016-2018**

EXPENDITURE		
particular	rs. In lakhs (2016-17)	rs. In lakhs (2017-18)
operating revenue earned (a+b+c+d+e)	177047.15	176470.6
a. Traffic revenue from sale of tickets	167998.91	168661.33
b. Passenger luggage- revenue	22.22	19.48
c. Revenue-contract services	4584.8	4133.36
d. Revenue- travel concession	4321.65	3541.83
e. Fines collected from the passengers	119.57	114.6
total operating expenses (a to g)	227889.51	235754.76
a. Traffic expenses	92802.33	99070.87
-employee cost	91737.37	96632.85
-other cost	1064.96	2438.02
b. Repairs and maintenance	24314.82	24907.17
c. Fuel, oil and lubricants	65592.71	65500.09
d. Taxes on passenger vehicles	9878.67	9844.6
e. Welfare expenses	18169.49	18914.7
f. Administrative expenses	6706.09	7209.92
g. Depreciation of vehicles	10425.4	10307.41
operating profit / loss (1-2)	-50842.36	-59284.16
non operating revenue	33563.26	46228.91
non operating expenses	8790.46	8671.43
net prior period expenses	21.45	35.73
net prior period income	0	0
profit/loss carried to forward to revenue appropriation account	-26091.01	-21762.41

# CHAPTER-2 CONCEPTUAL BACKGROUND AND LITERATURE REVIEW

#### 2.1 THEORETICAL BACKGROUND OF THE STUDY

The operating cost is the cost of providing a service. Operating costing is a method of costing used to ascertain the cost of providing a service. It is applied in case of those industries which provide service rather than manufacture of any tangible products. Ex: transport undertaking, power houses, gas, educational institutions, electricity and water supply concerns, hospitals, canteens, banks, etc. The service may be rendered by such undertakings either to the public or it may be used within the organization itself.

Operating costing offers a better degree for controlling purpose. It not only encourages the calculations of operation cost towards the closer of every operations of the company. But it helps in isolating the aggregate operation cost by taking in aggregate information units. It's the class of the fundamental costing techniques appropriate where institutionalized merchandise or administrations results that comes by grouping of redundant and pretty much nonstop operations or procedures to which expenses are charged before being arrived at the midpoint for over the units delivered amid periods. The techniques involve in 2 costing include the head procedure costing as well as administrations costing.

Operating costing defined "Charted Institute of Management Accounts (CIMA)" As that form of operation costing which applies when standardized services are provided either an undertaking or by a services cost centre within an undertaking.

The Institution of ICWA has stated "Operating cost" "As the expense acquired in leading a business action. Operating cost allowed to the cost of undertaking which do not manufacture any product but which provide service." On account of changes nature of exercise completed by the administration undertaking, the cost framework utilized is clearly not the same as the followed in assembling concerns.

#### 2.1.1 FEATURES OF OPERATING COST

Te following are the essential features of industries where operating costing is applied.

- 1. These concerns are engaged in providing a service rather than production of any tangible product.
- 2. The service may be rendered to the public or it may be internally used in the organization itself.
- 3. A unique and standardized type of service is provided to customers.
- 4. Huge investment in fixed assets when compared to investment in working capital.

#### 2.1.2 IMPLEMENTATION OF OPERATING COSTING

Concealed by the costing of the transport services the operation cost of each and every vehicle is analysed. The elementary crew of administration will be a tone Km if there will be and increment in the occurrence of products transport, and traveller Km in the event of traveller transport. Sample of transport administration are truck administrators street transport railroads carriers.

Welfare Services it incorporates administrations like containers, clinic, and library and so on. Lodgings entries utilized working costs. The aggregate working action in it may be separated and categorised as variety of cost focuses such as eatery clothing and so forth. The cost unit is by and large regarding per dish.

#### 2.1.3 COST OF UNIT

To analyse the expenses it's important in the direction of choosing the perfect match for the unit costs in every kind of administrations. Fundamentally working cost can be defined as a sort of procedure cost valuing. In this way the costing utilized a technique for procedure costing while discovering the expense of supply of power steam and so o. In any case now and again working costing might receive a specific employment as a unit of expenses with respect to sample when costing a specific trek by a transport to cite the charges. In such cases working treating so as to cost utilizes the techniques for occupation costing a particular trek as a different employment. The unit cost concealed by working cost can be of two times.

## Given below is the different type of unit are used in different services industries.

The Industry of services	Simple unit cost
The transport for the passenger	Per Km
The Transport for Goods	Per Km
The Maintenance of Road	Per Km
Supply of Water	Per Km of Road sustention
The Industry of Service	Composite Unit Cost
Power Supply	Per KWH
Health care	Patients per-Day

#### 2.1.4 EXPENSES BY TRANSPORT

The transport operation cost allowed to expenses which shift with vehicle use that include fuels, upkeep, repairing deterioration costs. Venture which changes the miles of a vehicle the is voyaged movement as postpone surfaces or geometry might influence explorer's vehicle working costs which ought to be considered in advantage cost examination.

Vehicle proprietorship costs allowed to settled expenses which are not straightforwardly influenced through mileages that include time subordinates devolution protection and enlistment charges financing and private stopping.

Venture which charge capital in vehicle's possession rate for example noteworthy change in nature of modes and area use availability night influence vehicle's proprietorship cost that ought to be consider in advantage expense investigation.

- Calculates all out changes in vehicle working expenses.
- For changes to ride qulity for example pothole repair and bend or review diminishments gauge impacts.

#### 2.1.5 COSTING AND COST ACCOUNTING

Costing is simple determining cost of a product manufactured or service rendered. Cost accounting denotes the formal accounting mechanism by means of which cots are ascertained by recording them in the books of accounts.

#### **Cost accounting**

The process of accounting for cost from the point at which expenditure is incurred or committed to the establishment of its ultimate relationship with cost centres and cost units.-CIMA, UK. It refers to the process of determining and accumulating the cost of a particular product or activity. It covers classification, analysis and interpretation of costs.

- 1. Unit costing
- 2. Job costing
- 3. Contract costing
- 4. Process costing
- 5. Operating costing
- 6. Multiple costing
- 7. Standard costing
- 8. Marginal costing

### 1. Unit Costing

This method is used where the final output consists of homogenous units. Cost per unit of output is calculated by dividing total cost by no. Of units manufactured. It is used in mines, quarries brick-kilns steel production flour mills etc

### 2. Job costing

Job costing is used in the business where production is carried out as per specific order and customer specification. E.g. House building, machinery production, printing press, interior decoration, painting etc.

### 3. Contract or terminal costing

It is also known as contract costing. In this method cost is accumulated for each of the contract. It is a variation of job costing; job is small but contract is big. It is used in the construction of brides, dams, roads, ship-building, apartment etc

### 4. Process costing

In this method the cost is ascertained per unit of output at each stage of the process. This is used in the industries where a final output passes through various processes.

### 5. Operating costing

It is well known as service costing. It is used by service organization such as transport, power house, hospital, hotels and lodging, cinema etc. The coat unit differs among service organizations.

### 6. Multiple costing

It is an application of more than one method of cost ascertainment in respect of the same product. The costs are accumulated for different components making the final product and then totalled to ascertain total cost of the product. This method is used in industries where a number of components are separately manufactured and then assembled into a final product. It is used where the nature of the product is complex like air conditioners, refrigerators, scooters, cars, locomotive works, aeroplanes etc.

### 7. Standard costing

It is closely allied to budgetary control. In these techniques, standard coat is predetermined as a target of performance and actual performance is compared against standards. The difference is analysed to know the reasons. So that corrective actions may be taken.

### 8. Marginal costing

It is a modern technique as against absorption costing. It is a technique of profit planning. In this technique, only marginal cost (variable cost) is considered as a cost of product; fixed cost is not considered as it is period cost. It is used to study the effect on profit of changes in volume or type of output.

### 2.1.8 CLASSIFICATION OF COSTS

### A. On the basis of nature or elements

- Material cost
- Labour cost
- Other Expenses

### B. On the basis of function

- Production cost
- Office and Administration cost
- Selling and distribution cost

### C. On the basis of convenience of identification

- Direct cost
- Indirect cost

### D. On the basis of variability

- Fixed cost
- Variable cost
- Semi variable cost

### 2.1.7 OBJECTIVES OF COST ACCOUNTING

- To determine **product cost** (i.e. Product Planning)
- Determining **selling price**; it provides cost information on the basis of which selling price of a product or service may be fixed.
- To facilitate planning and control of regular business activities: the management control over business operations aims to establish balance between actual and budgeted performances. It aims at improving efficiency by controlling and reducing costs.
- To supply information for short and long run decisions

### 2.1.8 ADVANTAGES OF COST ACCOUNTING

- Its reveals profitable and unprofitable activities/ products / services.
- It helps in cost control
- It guides in fixing selling price
- It helps in inventory control

- It helps in formulating policies
- It helps in cost reduction and cost control
- It reveals idle capacity
- It prevents frauds and manipulation through cost auditing

### 2.1.9 DISADVANTAGES OF COST ACCOUNTING

- It is expensive: Installation of costing system is quite expensive which only large concerns can afford.
- It is treated as duplication of work: It is argued that installing costing system is not
  necessary and involves duplication of work. But still many business firms feel the
  need of cost accounting.
- In-applicable to certain industries: It is said it is not applicable to non-manufacturing industries. But it is only wrong notion that costing is applicable only to manufacturing industries; costing is also applicable to on-manufacturing industries. Costing system is designed to the need of business firm.

### 2.1.9 ELABORATIVE INFORMATION ON TOPIC

Variable costs incorporate raw material, vitality utilization work, conveyance cost and so forth Organization with high variable costs are fundamentally unique in relation to those with settled expanses. This destination influences the monetary structure of the organisation and also it's evaluating and benefit.

The Operating cost includes Variable cost and Fixed costs.

Variable cost is including two types.

**Distance related component** is related segment incorporates Fuel utilization Spare parts, Tire wear, Lubricants and Maintained work cost and so forth.

**Time related component** this are related parts incorporates Depreciation, Value of the traveller time Wages of the group and so forth.

### **Fixed cost**

The Fixed expense incorporates the capital cost Registration fees, Insurance, Road licence charges, and different duties.

### 2.1.12 COST REALATED RATIO ANALYSIS

Ratios and other execution makers are frequently discovered utilizing formulas. Accountancy has a considerable measure of proportions, however in the event that you need to utilize the data you have to go past figuring out how to compute proportions. Management accountants concentrate on the proportions that apply to the running of the business. They have to see how proportions are figured and the key impact on proportions.

This comprehension can help directors while controlling the business and when arranging or setting on choices about what's to come.

Table No 3.1 FORMULAS

1	Direct Material Cost per Unit	=	Total material cost Sales volume
2	Direct Labour Cost Per unit	П	Total labour cost Sales volume
3	Operating Profit Margin	П	Operating profit x100 Sales revenue
4	Selling and Distribution Cost per unit	П	Selling distribution cost  Sales volume
5	Return on Net Assets	II	Operating profit x100  Net assets

### 2.2 REVIEW OF LITERATURE

**AKBAR ET AL (2001)** Proposed that cost classes incorporate roadway offices and administration, stopping air contamination and an unnatural weather change, security expenses of importing oil, car crashes, clamour, and land misfortune. The report's decision that driving brings about \$ 350 billion every year in outside expenses has been cited around the world.

HICKS AND EPPS (1999) Stated this is a primary exhaustive transport expense concentrates on creating scene. Incorporates automobiles, roadway, stopping, blockage, and natural expenses. In spite of the fact that car proprietorship is generally low contrasted and created nations, fast(10% yearly) development in vehicle possession forces significant medium-term cost as far as expanded clog, office needs, contamination, and so forth. macroeconomic expenses by catching a noteworthy segment of remote trade and potential venture stores.

RUNZHEIMER INTERNATIONAL (1999) States that the total costs of urban transport; Intermodal Comparisons, Institute of Regional Development. This analyzes ascertaining expenses of car, transport in the San Francisco Bay region. It includes minor blockage expenses, open administrations, commotion, and air contamination, offices, stopping, and clients costs. This is the most established investigation.

AASHTO (2003) Says in results of literature survey and summary of findings: The Nature and Magnitude of Social Costs of city Roadway Use, U.S. Government Highway Administration. This statement perceives external costs of city roadway transport and depicts expense methods. It moreover consolidates proposition for better registering outside costs, melding cost into customer expenses, and implementing smallest cost needing to transportation.

**ARMSTRONG ET AL.** (1983) Says the article getting the Prices Right: An European Rule for Making Transport Pay its Costs, European confederation for transport and environment demonstrates a basic study that gauges contamination, accident and base expenses in broad daylight transport division.

**CHU AND BEASLEY (1999)** The Price of Mobility, Natural Resources Defense Council (NRDC). This investigation tried to evaluate absolute expenses for vehicles, transports, and railway transport in the U.S it a champion amongst the careful attempts with respect to costs depicted and assessed.

**COHN WAYSON AND HARRIS** (1992) He says this research gauges client, mishap, blockage, stopping, street offices and administrations, air contamination, water contamination, vitality, and commotion costs. Urban sprawl and tasteful debasement are said yet not assessed.

**DYER**, **RIHA AND WALKER** (1995) There are says this work endeavoured to completely assess the financial and ecological expenses of petroleum use, and the monetary and natural expenses of other transportation powers, including the expenses and estimations of natural externalities, and to build up a state transportation vitality strategy that outcomes at all natural and monetary expense to the state. Includes blockage, mischance, foundation upkeep, administrations, air contamination.

**FRIEZE AND CLARKE** (1984 Clarified saving energy in Transportation, Office to Technology Assessment. This report gives an extensive examination of transportation expenses and their monetary and natural effects. Incorporates assessments of aggregate U.S engine vehicle costs in light of exploration by Mark Delucchi of U.S Divis. Talks about different arrangement alternatives for enhancing vitality productivity.

**LOBBY, CORREA, CARPENTER, AND ELLIOTT** (2003) Says this study gauges expenses for truck, rail car, open travel go in Ontario, Canada. Surveys expenses gauges from past research. Expenses are isolated into client cost, outer expenses, and essential appropriations. It is utilized to assess possible measures to energize economical cart.

**BIRD OF PREY (2003)** Says the exact expenses of Road Transport, Blueprint 5, Earthscan. This report talks about monetary productivity and value ramifications of road cart area.

**KLAMROTH AND WIECK (2004)** Says this report is worried with whether different engine vehicle classifications are imposed by expenses are force on roadway framework.

**LABI, S. FURTHERMORE, SINHA** (2005) Says 'Contrasting Multimodal Alternatives in Major Travel Corridors' outlines the different expenses for looking at venture options out in the open transport industry.

**LEE AND GUIRNARD.** (1988) Says "External environmental costs of transport comparison of recent studies," Public expenses and sustainable flexibility, ZEW, Physica-Verlag, pp. 15-20. These paper provides estimates of external costs for Car, Bus, Rail, Air and Water transport (passenger and freight) based on four previous European studies.

**ZEMEL** (1984) Builds up an assessment of mishaps, clamour, air contamination, environmental change dangers, other natural and non ecological impacts, and clog for three modes (rail, air and water transport) in 16 Asian nations for 1995 and 2011. The immediate reasons for the expansion are movement level development, particularly on street and airway cart, and expanded contamination expenses.

MARTELLO S AND P TOTH (1990) Says the final report of examination structure and experimental outcome are expected to advise approach creating the regions of plying, tax collection and sponsorships. The examination incorporates base, automobiles, clog, accident, and contamination expenses. Gauges of vehicles utilize for the most part takes care of expenses, yet under prices concerning peripheral expenses.

McCUBBIN AND DELUCCHI (1996) Says that outside cost gauges change fundamentally, yet these distinctions can be clarified by contrasts in the sorts of expenses and conditions assessed, and that issues of investigative vulnerability are a little commitment of variety.

**KEELER, ET AL** (1975) The full costs of urban Transport. This report compares commuting costs of automobile, bus in san Franciso. It includes marginal costs, public Services, facilities, parking, and other costs. This is the oldest study of its type.

**JOHN POORMAN** (1995) Estimating Marginal Monetary costs of transportation, Capital District Transportation Committee. This report describes a least cost framework and model, with performance measures and monetized costs for evaluating transport investments and policies, and comparing various modes.

**DAVID MADISON, DAVID PEARCE, EDWARD CALTHROP, (1996)** the true costs of Road Transport; it discusses the economic efficiency and equity implications of roadway transportation. Develop estimates of external costs in the U.K, including air pollution noise congestion roadway facility costs and accident costs.

### CHAPTER-3 RESEARCH DESIGN

### 3.1 STATEMENT OF THE PROBLEM

The operating cost is an important technique which helps the management to take sound, prudent, financial and investment decisions. It also helps to evaluate business, financial, total risk of any organization. The task of choosing most suitable combination of different techniques in the light of the firm's anticipated securities for financing fund requirements earnings is facilitated by it. In matters relating to investment also operating cost is immensely helpful. It acts a useful guideline in setting the maximum limits by which the business of the firm should be expanded.

### 3.2 NEED FOR THE STUDY

- The study helps to management by providing clear picture about the operating cost of the company.
- It helps to determine the historical performance and current performance conditions.

### 3.3 OBJECTIVES OF THE STUDY

- To identifying the cost data with respect to operating costing.
- To analyze the cost fluctuation in each year.
- To examine monetary and non-monetary cost and its implication.

### 3.4 SCOPE OF THE STUDY

The scope of the study of the project is to analyze the differences in the cost on the profitability of the firms in service and manufacturing industries. Only 2013-14 and 2017-18 annual reports have been used for the study and the operating leverage of the company.

### 3.5 LIMITATIONS OF STUDY

- The indicated time period was not adequate.
- This study was purely based on secondary data

### 3.6 METHODOLOGY

### 3.6.1 Research Design

Analytical Research is a kind of examination that incorporates basic speculation abilities and the assessment of realities and data identified with the exploration being led. It helps to find out critical details to add new ideas to the material being produced. This research use analytical research design.

### 3.6.2 Data Sources and Sample Design

This research will be benefitted by the data collected about the cost that be obtained from Profit and Loss statement and balance sheet from BMTC.

### 3.6.3 Time Period

This research is done with the data collected between the time periods of 2013-2017

### 3.6.4 Proposed Methodology

The proposed methodology involves collection of data from secondary sources. The data so collected is used to analyze the necessary tools that are important. Inferences are drawn incorporating both quantitative and qualitative data available at the research disposal. For the purpose of the study the required data collected through secondary sources.

### 3.6.5 Framework for Data Analysis

The methodology involves collection of data from secondary sources. The data so collected is used to analysis the necessary tools that are important. Inference is drawn incorporating both quantitative and qualitative data available at the research disposal.

1	Direct Material Cost Per Unit	= Total Material Cost  = Sales Volume
2	Direct Labour Cost Per Unit	= Total Labour Cost  Sales Volume
3	Operating Profit Margin	Operating Profit X 100 = Sales Revenue
4	Selling and Distribution Cost Per Unit	= Selling Distribution Cost Sales Volume
5	Return On Net Assets	= <u>Operating Profit</u> X 100 Net Assets

### 3.7 CHAPTER SCHEME

Chapter-1:- Interdiction

Chapter-2:- Conceptual background and Literature review

Chapter-3:- Research design

Chapter-4:- Analysis and Interpretation

Chapter-5:- Findings, Conclusion, and Suggestions

- Bibliography
- Annexure

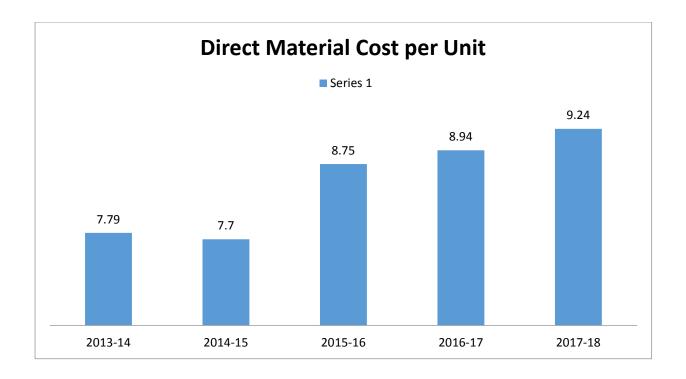
## CHAPTER:- 4 ANALYSIS AND INTERPRETATION

## 4.1 ANALYSIS AND INTERPRETATIN TABLE NO-4.1 Calculation of Direct Material Cost per Unit 2013-2018

Year	Total Material cost	Sales Volume	Direct Material
			Cost per Unit
2013-2014	1038.36	1,76,557.61	7.79
2014-2015	1536.21	1,99,411.06	7.70
2015-2016	1680.11	1,91,802.62	8.75
2016-2017	1582.85	1,77,047.15	8.94
2017-2018	1630.97	1,76,470.60	9.24

Source: BMTC Balance sheet and Profit/ Loss account of 2013-2018

GRAPH-4.1
The Graph Shows the Direct Material Cost per unit of 2013-2018



Source: Table NO- 4.1

### **INTERPRETATION**

The above Table and Graphs represent the exaggerated from Direct Material Cost per Unit during the period 2013-2018. As per the findings and the relevant information collected, the Direct Material Cost per Unit has shown it increment specifically every year. It is noticed that during the year 2017-18 the ratio is much higher when compared to previous year. Minimum growth rate of 10% has been observed at each level.

TABLE 4.2
Calculation of Direct Labour Cost per Unit of 2013-2018

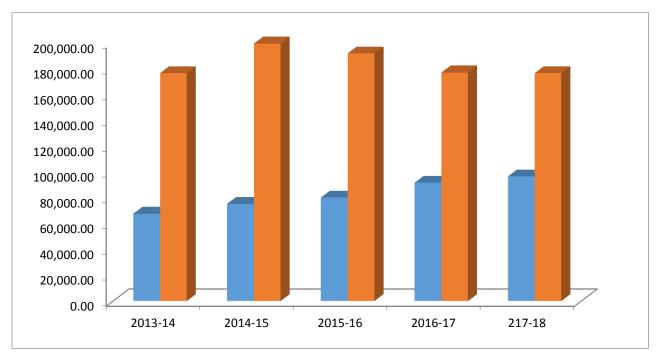
Year	<b>Total Labour Cost</b>	Sales Volume	Direct Labour	
			Cost per Unit	
2013-2014	67,672.29	1,76,557.61	0.38	
2014-2015	75,321.53	1,99,411.06	0 .37	
2015-2016	80,198.14	1,91802.62	0.41	
2016-2017	91,737.37	1,77,047.15	0.51	
2017-2018	96,632.85	1,76,470.60	0.54	

Source: BMTC Balance sheet and Profit/Loss account of 2013-2018

GRAPH NO-4.2

The Graph shows the Direct Labour Cost per Unit of 2013-2018

Direct Labour Cost per Unit



Source: Table NO- 4.2

### **INTERPRETATIN**

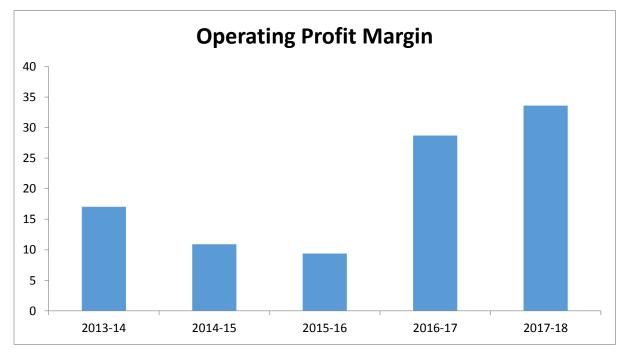
The above Table Graphs represent the exaggerated from of Direct Labour Cost per Unit during the reign 2013-2018. As per the findings and the relevant information collected, the Direct Labour Cost per Unit has sown increment from in the year 2013-2018. There is a drastic fall off rate in the Sales volume from 2013-2018 as compared to the previous year. This led to the slight increment in Labour cost attained the consequence led to a vast increment in sales volume in the following year that is 2017-2018.

TABLE NO-4.3 Calculation of Operating Profit Margin 2013-2018

Year	Year Operating Profit/Loss Sal		<b>Operating Profit</b>
			Margin
2013-2014	30083.71	1,76,557.61	17.03
2014-2015	21779.98	1,99,411.06	10.92
2015-2016	18041.09	1,91,802.62	9.40
2016-2017	50842.36	1,77,047.15	28.71
2017-2018	59284.16	1,76,470.60	33.59

Source: BMTC Balance sheet and P/L account of 2013-2018

GRAPHNO-4.3
The Graph shows the Operating Profit Margin of 2013-2018



Source: Table NO- 4.3

### **INTERPRETATION**

The above Table and Graphs shows the Operating Profit Margin of 2013-2018. As per the findings and relevant information collected, the Operating Profit Margin has shown drastic change in Sales Revenue as well as Operating Profit Margin. This sales revenue has shown is growth rate from 2014-15, and fall in 2015-16. A high fall of Operating Profit Margin is attained during the year 2015-2016.

TABLE NO-4.4
Calculation of Selling and Distribution Cost per Unit of 2013-2018

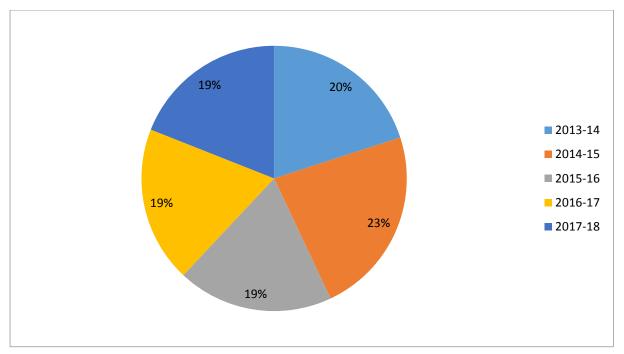
Year	Selling and Distribution Cost	Sales Volume	Selling and Distribution Cost per Unit
2013-14	9512.07	1,76,557.61	0.06
2014-15	10,983.76	1,99,411.06	0.05
2015-16	9131.42	1,91802.62	0.04
2016-17	8790.46	1,77,047.15	0.04
2017-18	8670.43	1,76,470.60	0.04

Source: BMTC Balance Sheet and P\L account of 2013-2018

GRAPHS NO-4.4

The Graph Shows the Selling and Distribution Cost per Unit of 2013-18

Selling and Distribution Cost per Unit



Sours: Table NO- 4.4

### **INTERPRETATION**

The above Table and Graphs we can see the selling and distribution cost Sales volume is more in 2014-15 compared to other years. The selling and Distribution cost per Unit has showing the constant growth every year, that is from 2013-2018. On the other the sales volume has shown a permanent increment from 2013-2018. This has therefore shown a direct prominent relation between Sales volume and Selling and Distribution Cost per Unit.

TABLE NO-4.5

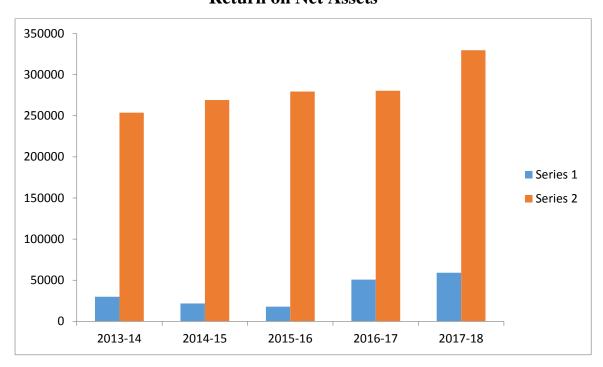
Calculation of Return on Net Assets of 2013-2018

Year	Operating Profit	Net Assets	Return on Net Assets
2013-14	30083.71	2,53,784.98	11.85
2014-15	21779.98	2,69,159.97	8.09
2015-16	18041.69	2,79,442.57	6.45
2016-17	50842.36	2,80,436.29	18.12
2017-18	59284.16	3,29,750.75	19.97

GRAPH NO-4.5

The Graph Shows the Return on Net Assets of 2013-2018

Return on Net Assets





Source: Table NO- 4.5

### **INTERPRETATION**

The above Table and Graphs represent the exaggerated from Return on Net Assets during the reign 2013-2018. As per the findings and the relevant information collected, the Return on Net Assets has shown the increment of Operating Cost the year 2013-14 and a declined in the following year 2014-2016 later increment on 2016-2018.

# CHAPTER:-5 SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSIONS

### 5.1 FINDINGS

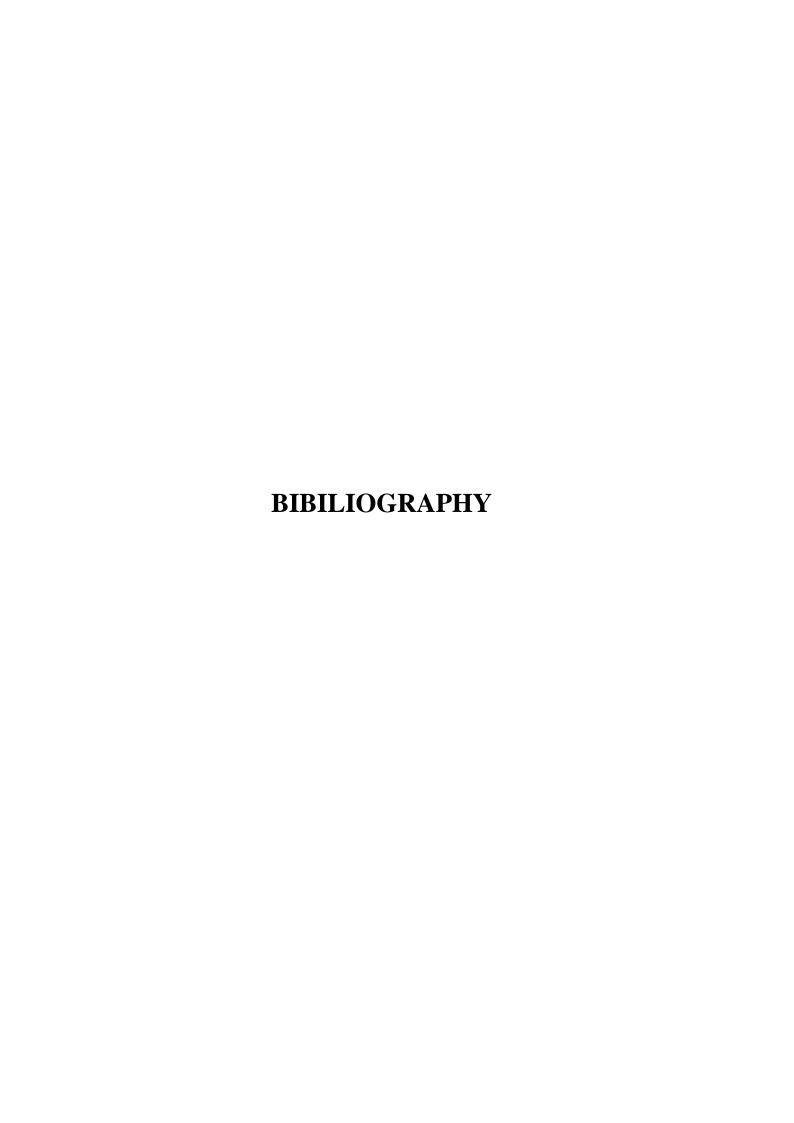
- 1. The Direct Labour and Material Cost increasing year to year so it will reduce the Net Profit of the company.
- 2. The profit of company is increasing from one year to another year.
- 3. In the above study and analysis we don't have any Direct tax because it's a service oriented government company.
- 4. The operating expenses of the company is increased from year to year, because to increase the company profit and to motivate the employees to work sincerely and honestly.
- 5. The company main aim is giving good service to the public from adopting of new technology and innovation of the company.
- 6. All the profits of the company goes to the respected government.
- 7. The operating leverage is increased in the total cost of the company from year to year.

### **5.2 SUGGESTONS**

- 1. To reduce the expanses and increase the profit. To maintain the same leverage in between operating leverage of the company.
- 2. To maintain the same revenues through for maintaining the good service to the society.
- 3. To take care of losses in future year of the company.
- 4. BMTC should focus on reduction in the present costs in order to increase the profit.
- 5. BMTC should make a strategic customer analysis to understand the expectation of the customers or society.
- 6. To maintain the good relationship between the public and employees.
- 7. The company can make optimum utilization of it's own financial resources rather than borrowing from financial institutions.
- 8. To give proper training to the employees for how to behave with passengers in the some miss understanding that time.
- 9. To maintain the cleaning and other facility in bus stations.
- 10. BMTC should make strategic value chain analysis for the efficient utilization and control over the resources.

### 5.3 CONCLUSION:-

- 1. Profit of the company is increasing from year to year.
- 2. Costs of the company are increasing from one year to another year. When the profit is decrease also cost is not decreased.
- 3. Performance of the company is increasing the profit of the society for the help of service industry.
- 4. Operating costs and operating expenses are also increasing by one year to another year.
- 5. The operating leverage of the company is fluctuating from one year to another year, because of the reasons of inflation and deflation in the economy. Behalf of these reasons the prices of oil, fuel and other employee costs are increasing.

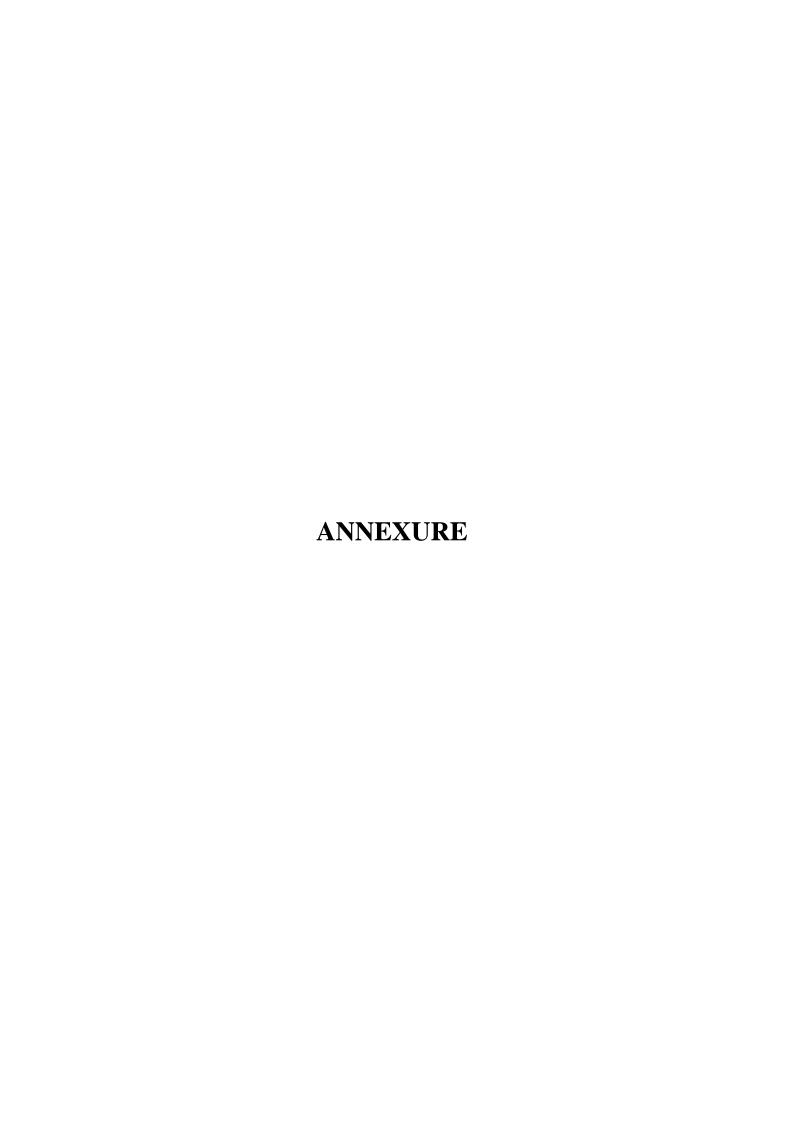


- Aasht0(2003) user benefit analysis for highways. American association of state highway and transportation officials, Washington, D.C.pp.MII-M5
- Aggarwal, Deo VN, and Sarkar D.(1992) The Knapsack Problem with Disjoint Multiple- Choice Constraints Naval Research Logistics 39, 213-227.
- Akbar et al, (2001) Heuristic Solutions for The Multiple-Choice Multi-Dimension Knapsack Problem working Paper, University of Victoria, British Columbia, Canada.pp.50-58
- Armstrong, et al, (1983). A Computational Study of a Multiple-Choice Knapsack Algorithm. ACM Transactions on Mathematical Software9(2), 184-198.
- Runzheimer International. (1999) Your Driving Costs. American Automobile Association, Heathrow, FL.pp.34-41
- Cambridge Systamatics, Inc. (2000). A Guidebook for Performance-Based Transportation Planning. NCHRP Report 446 National Academics Press, Washington, D.C.pp.M69-M71
- Chu, P.C, and Beasley J.E.(1998). A Genetic Algorithm for the Multidimensional Knapsack Problem Journal of Heuristic 4, 63-86.
- Cohn, L, Wayson R, and Harris R.(1992) Environmental and Energy Considerations In Transportation Planning Handbook (Edited by J. Edwards) Institute of Transportation Engineers, pp.121-129
- Dyer D.c (1984) An Algorithm for the Multiple-Choice knapsack Linear Program Mathematical Programming 29, 57-63.
- Dyer, M.E., Riha W.O., and Walker J. (1995) A Hybrid Dynamic Programming/Branch-and-bound Algorithm for the Multiple-Choice Knapsack Problem. Journal of Computational and Applied Mathematics 58, 43-54.
- Hawk, H. (2003). Bridge Life Cycle Cost Analysis NCHRP Report 483 National Academies Press, Washington, D.C.
- R.G, and J.A Epps. (1999). Life Cycle Cost Analysis of Asphalt-Rubber Paving Materials. Final Report Volumes I and II to Rubber Pavements Association, Tempe, AZ,pp.M55-M6

- Klamroth, K., and M.M Wieck. (2001). Dynamic Programming Approaches to the Multiple Criteria Knapsack Problem Knapsack Problem. Working Paper. Clemson University, Clemson, SC.
- Labi, S. And K.C Sinha. (2005). Life Cycle Evalution of Highway Pavement Preventive Maintenance ASCE Journal of Transportation Engineering 131(10), 744-751.
- Lee, J.S., and M. Guignard. (1988) an Approximate Algorithm for Multidimensional Zero-One Knapsack Problems- A Paramatic Approach. Management Science 34(3), 402-410.
- Lorie, J.H., L.J. Savage. (1955) Three Problems in Rationing Capital. Journal of Business XXVIII(4), 229-239.
- McCubbin, D., and M. Delucchi. (1996). The Social Cost of the Health Effects of Motor Vehicle Air Pollution. Report 11 in the Series: The Annualized Social Cost of Motor Vehicle Use in the United States, Based on 1990-1991 Data. Institute of Transportation Studies, University of California, Davis, CA.
- Moser, M., D.P. Jokanovic, and N. Shiratori. (1997) An Algorithm for the Multidimensional Multiple-Choice Knapsack Problem. IEICE Transaction Fundamentals E80-A (3), 582-589.

### **Web Sites**

- http://www.mybmtc.com
- <a href="http://www.mybmtc.com/organisational-structure">http://www.mybmtc.com/organisational-structure</a>
- www.wikipedia.org



ANNEXURE

Bangalore Metropolitan Transport Corporation Profit and Loss of 2013-2018

EXPENDITURE					
particular	rs. In lakhs (2013-14)	rs. In lakhs (2014-15)	rs. In lakhs (2015-16)	rs. In lakhs (2016-17)	rs. In lakhs (2017-18)
operating revenue earned (a+b+c+d+e)	176557.36	199411.06	191802.62	177047.15	176470.6
a. Traffic revenue from sale of tickets	164844.22	187944.24	181450.34	167998.91	168661.33
b. Passenger luggage- revenue	41.14	40.29	33.06	22.22	19.48
c. Revenue-contract services	6908.74	6714.22	5636.29	4584.8	4133.36
d. Revenue- travel concession	4628.54	4538.93	4542.75	4321.65	3541.83
e. Fines collected from the passengers	134.72	173.38	140.18	119.57	114.6
total operating expenses (a to g)	206641.07	221191.04	209844.31	227889.51	235754.76
a. Traffic expenses	68561.24	76572.38	81338.75	92802.33	99070.87
-employee cost	67672.29	75321.53	80198.14	91737.37	96632.85
-other cost	888.95	1250.85	1140.61	1064.96	2438.02
b. Repairs and maintenance	20115.04	21499.88	23061.77	24314.82	24907.17
c. Fuel, oil and lubricants	76393.4	76862.85	60571.53	65592.71	65500.09
d. Taxes on passenger vehicles	9835.82	11107.82	10690.93	9878.67	9844.6
e. Welfare expenses	12992.14	15181.92	16877.16	18169.49	18914.7
f. Administrative expenses	6274.19	6340.22	6054.03	6706.09	7209.92
g. Depreciation of vehicles	12469.24	13625.97	11250.14	10425.4	10307.41
operating profit / loss (1-2)	-30083.71	-21779.98	-18041.69	-50842.36	-59284.16
non operating revenue	24836.86	26273.37	28945.77	33563.26	46228.91
non operating expenses	9512.07	10983.76	9531.42	8790.46	8671.43
net prior period expenses	0	0	0	21.45	35.73
net prior period income	0	0	0	0	0
profit/loss carried to forward to revenue appropriation account	-14758.92	-6490.37	-1372.66	-26091.01	-21762.41

### **Bangalore Metropolitan Transport Corporation Balance sheet of 2013-18**

Bangalore Metropolitan Transport Corporation Balance sheet of 2013-2018 Rs. in Rs. in Rs. in lakhs lakhs Rs. In lakhs Rs. in (2013-(2014lakhs(2 (2016lakhs **Particulars 14**) **15**) 015-16) (2017-18)**17**) 10459.4 10459.4 10459.5 10459.5 10459.48 1. EQUITY CAPITAL (Schedule 1) 10459.4 10459.4 10459.4 10459.4 A. State government 10459.48 8 8 8 8 B. Central Government 0.0 0.0 0 0 11382.2 7706.09 5312.25 5312.25 5312.25 2. CAPITAL CONTRIBUTION (Schedule 11) 11382.2 5312.25 5312.25 5312.25 7706.09 A. Karnataka Government capital B. Union Government capital 0.00 0 0.00 0 90404.6 99404.6 79004.6 92904.6 111204.6 3. INTERNAL RESOURCES (Schedule 111B) 3 27821.1 29098.4 9565.13 16081.1 18789.59 4. RESERVES AND FUNDS 13225.4 15509.1 14620.4 A. Reserves (Schedule IIIA) 6424.86 13949.87 8 14477.9 12312 B. Depreciation Reserve (Schedule IV) 3140.27 2855.62 4839.72 245934. 238203. 255460. 273657. 353227.7 5. LOANS 23 28 69 66914.2 59471.4 47280.9 61823.7 90539.71 A. Secured loans (schedule V) 2 14375.4 14.71 9.93 11994.25 B. Unsecured loans (schedule VI) 16.68 171272. 184095. 195978. 212001. 250693.7 total 39 87 85 23 45761.9 54803.8 51830.8 62893.1 79057.00 6. LIABILITIES A. Current liabilities and provisions (Schedule 49110.4 45676.8 58401.8 40037.4 74420.12 VII) 8 1 3 B. Provisions for write-off of anticipated loss 42.62 75.15 55.09 54.81 42.12 on disposal of obsolete stores C. provision for bad and doubtful debts 0.00 0 0 0.00 0 5618.22 4436.53 D. Deposits (other than public deposits) 5681.95 6098.91 4594.76 45761.9 62893.1 54803.8 51830.8 79057 **Total** 36750.6 30260.2 31632.9 5541.89 0.00 7. NET PROFIT/ loss 31632.9 51509.5 36750.6 30260.2 0 A. net profit b/f from previous year 26091.0 B. Less: net loss b/f from net revenue 14758.9 1372.66 0 6490.37 appropriation A/c 36750.6 30260.2 31632.9 0 5541.89 total 5

	253784.	269159.	279442.	280436.	329750.7			
Grand Total	98	97	57	29	5			
ASSSETS								
A. fixed assets	228567.	231797.	232008.	233826.	259747.0			
Ti. Tixed dissels	23	55	59	96	9			
B. Capital Work in progress								
- civil works	7282.74	8987.85	10772.4 6	12848.1 3	11603.08			
- Civil works- JuNURM	0	1335.3	2306.56	3845.27	659.41			
- vehicles	170.53	0	0	140.40	208.26			
#NAME?	2279.48	2279.48	1697.17					
Total	238299.	244400.	246784.	250660.	272217.8			
	98	18	78	76	4			
2. INVESTMENTS	-	-	-	-	-			
A. insurance and accident reserve fund	0.00	0	0	0.00	0			
B. other investments	0.00	0	0	0.00	0			
C. Contingency fund	0.00	0	0	0.00	0			
3. CURRENT ASSETS								
A. Inventories								
- stores and spares	2473.67	2067.59	2504.48	2543.79	3266.24			
- work in progress	34.22	27.83	29.92	48.27	175.38			
B. SUNDRY DEBTORS	2288.74	4184.98	2394.49	2967.77	6594.20			
- Debtors considered good	2288.74	4184.98	2394.49	2967.77	6594.2			
- Debtors considered doubtful	0.00	0	0	0.00	0			
C. ADVANCES	4129.18	7572.41	9828.68	11627.1 8	11901.85			
- Advance to Employees	436.95	218.41	650.18	187.90	233.4			
- Advance to Suppliers	65.95	116.01	334.71	237.74	122.27			
- Advance to other parties	3626.28	7237.99	8843.79	11201.5 4	11546.18			
D. INTEREST EARNED ON INVESTMENT BUT NOT RECEIVED	2.69	2.45	0	0.00	0			
E. STOCK ADJUSTMENT ACCOUNT	0	3.44	3.44	3.44	37.09			
F. ASSET ADJUSTMENT ACCOUNT	52.34	0	0	0.00	0			
G. DEPOSIT BY THE CORPORATION	2369.12	2432.21	2732.82	3005.83	3191.79			
H. PRE- PAID EXPENSES	45.71	554.21	552.65	272.39	270.93			
I. CASH	4044.02	7881.23	14589.3 1	9295.86	15875.86			
- cash in hand	4044.02	1304.43	1278.61	1056.52	954.82			
- cash at bank		6186.02	12766.0 2	8134.88	14899.85			
- Depot manager account		390.78	544.68	104.46	21.19			
total	15439.6 9	24726.3 5	32635.7 9	29764.5	41313.34			
			. /		i .			

5. NET LOSS	0.00	0	0	0.00	0
A. Net loss b/f from the previous year	0	0	0	0	-5541.89
B. add. net loss b/f from net revenue appropriation A/c	0	0	0	0	21761.46
total	0	0	0	0	16219.57
Grand Total	290535.	269159.	279442.	280436.	329750.7
	60	97	57	29	5



### **ACHARYA INSTITUTE OF TECHNOLOGY DEPARTMENT OF MBA**

### PROJECT (17MBAPR407) -WEEKLY REPORT

NAME OF THE STUT: MADHU S

INTERNAL GUIDE: YUVARAJ HALAGE

**USN: 1AY17MBA24** 

**COMPANY NAME: BMTC** 

WEEK	WORK UNDERTAKEN	EXTERNAL GUIDE SIGNATURE	INTERNAL GUIDE SIGNATURE
3 <sup>rd</sup> Jan 2019 – 9 <sup>th</sup> Jan 2019	Industry Profile and Company Profile	5	1 mone
10 <sup>th</sup> Jan 2019 – 17 <sup>th</sup> Jan 2019	Preparation of Research instrument for data collection	}	1 mona)
18 <sup>th</sup> Jan 2019 – 25 <sup>th</sup> Jan 201 <b>§</b>	Data collection		Imany
26 <sup>th</sup> Jan 2019 – 2 <sup>nd</sup> Feb 2019	Analysis and finalization of report	5	Juin )
3 <sup>rd</sup> Feb 2019 – 9 <sup>th</sup> Feb 2019	Findings and Suggestions	k	Turano
10 <sup>th</sup> Feb 2019 – 16 <sup>th</sup> Feb 2019	Conclusion and Final Report		Linany

ompany \$

BANGALOR

College Seal

**HOD Signature** 

Head of the Depar Department of MBA Acharya Institute of Technology Soldevanahili, Bangalore-560 107