

A STUDY ON COST AND COSTING MODELS AT TECH MAHINDRADr.Subramanyam¹ , Gudla Prem Kumar² , Dr Danda Uday shekar³Dr Subramanyam⁴GUIDE¹, STUDENT², HOD³, CORRESPONDING AUTHOR⁴

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INTRODUCTION

Cost is essential in every walk of our life – national, domestic and Business. A cost is prepared to have effective utilization of funds and for the realization of objective as efficiently as possible. Costing is a powerful tool to the management for performing its functions i.e., formulation plans, coordination activities etc., efficiently. For efficient and effective management planning and costing are two highly essential functions. Cost and costing models provide a set of basic techniques for planning and costing.

NEED OF THE STUDY

The importance of cost reduction programs within a company cannot be overstated. Companies that are losing money, need to increase profits, or must become more competitive need to cut expenses in order to succeed. Knowing how to implement effective cost reduction strategies can be the determining factor in the survival of a business.

When a company must generate more cash as fast as possible, management will have to decide which costs can be most effectively reduced. If the reduction is needed quickly, expenses cut first will normally be those that are not fixed or directly tied to production. It is not a good idea to drastically reduce expenses that produce the company product or service without careful evaluation.

Studying the cost and costing models of Tech Mahindra can provide valuable insights into the financial aspects of the company's operations. Understanding their costing models can help analyze the allocation of resources, pricing strategies, and cost management practices. It can also provide insights into the company's profitability, efficiency, and competitive position within the industry. By studying these aspects, researchers, analysts, and stakeholders can make informed decisions, identify areas for improvement, and assess the financial health of the organization.

OBJECTIVES OF THE STUDY

1. To analyze the profit of the organization as a backdrop for undertaking a study of Cost and costing models.
2. To analyze the cost system in practice in TECH MAHINDRA with particular reference to their objectives and phases of organizational and re-appropriation.
3. To analysis of the conventional cost system in practice in profitability analysis and performance.
4. To analyze the variations of the actual from the cost estimates.
5. To examine the Cost control and pricing strategy.
6. To analyze the profitability and to make decisions.

SCOPE OF THE STUDY

Since it will not be possible to conduct a micro level study of all type industries in Telengana, the study is restricted to TECH MAHINDRA only. To analyze the cost on particular basis of cost material confirms the commodity on profit control. In addition of cost system perform material factors on current cost system. To understand the performance we need to calculate the present factor of frame work concept. Providing particular performance on digital factor depends on material basis. (2018-2022).

RESEARCH METHODOLOGY

The proposed study is carried with the help of both primary and secondary sources of data. The data of TECH MAHINDRA have been collected mainly from secondary sources viz.,

- Form the concerned officers of the TECH MAHINDRA
- TECH MAHINDRA journals.
- Accounting books, records.

- Key books of concerned title.
- Statistical records
- TECH MAHINDRA library
- Comparative analysis
- Ratio analysis
- Horizontal and vertical analysis

SECONDARY DATA

All the secondary data used for the study has been extracted from the annual reports, manuals and other published material of the company.(2018-2022).

LIMITATIONS

1. Estimates are used as basis for cost plan and estimates are based mostly on available facts and best managerial judgment
2. Cost & costing models cannot reduce the managerial function to a formula. It is only a managerial.
3. Tool which increase effectiveness of managerial costing.
4. The use of cost may be to restricted use of resources. Costs an often taken as limits.
5. Efforts may therefore not be made to exceed the performance beyond the cost targets.

REVIEW OF LITERATURE

Mills (1994) acknowledged the innovative Italians of the Renaissance (14th -16th century) as the fathers of modern accounting. The man recognized as the creator of basic accounting and put forward the body of knowledge as well as proposer of systematic Accounting Practices is Luca Pacioli, an Italian mathematician and writer. The formal accounting system is referred in the text book by Pacioli entitled –*Summa de Arithmetica, Geometria, Proportionate Proportionalita*” in 1494. This book defined double entry bookkeeping as the "Venice system", and it was printed as well as spread throughout Europe. This book, however did not lay claims of Pacioli as the originator of double entry bookkeeping as its content described accounting system which was in use by Italian Merchants from more than 200 years, prior to publication of this book. The contemporary evidence identifies that double entry bookkeeping developed in the Genoa-Venice-Florence during 1200-1350 as a part of a vast commercial revolution. Accounting records of Rinierie Fini and Brothers (from 1296- 1305) and Farolfi and Company (1299-1300) indicate complete double entry accounting. The accounting system in those days was much developed as each accounting entry had a separate debit and credit, with the equivalent of journals and ledgers. They kept extensive business records and by understanding cost and revenue structures they were in a position to make better decisions than competitors having no formal accounting knowledge and practice. Thus, from about thousand years’ practice of systematic accounting recognizing cost and revenue places users in a better position than the competitors without this knowledge base.

The body of accounting knowledge got much systemized in the last two decades of the 15th century and at the advent of 16th century. Accounting records were made meaningful as reflected in the work of Luca Pacioli. His book entitled –*Summa de Arithmetica, Geometria, Proportionate Proportionalita*” reprinted in 1504 defines his contribution to the development of accounting practices. The third chapter of this reprint discussed and explained the rules of debit and credit, inventory, disposition and preparation of journal, ledger and trial balance. This book contains detailed discussion regarding rules transferring nominal accounts to profit and loss account giving effect of them to capital account. Subsequently this book was translated and published in Scottish, German, French, Russian and English. (Paton and Littleton, 1940). Thus, today’s world recognizes Pacioli as an originator of systematic accounting knowledge and practices in the name of double entry book keeping which he himself never claimed. On the contrary he referred in his book that double entry bookkeeping practices were in use prior to his era.

Until the end of Middle Ages i.e. fifteenth century, accounting was developed in the name of double entry bookkeeping and was also put into practice; the same is reflected in the study of Littleton, A. C. (1933) where he discussed key ingredients’ leading to development and practice of double entry bookkeeping. He identified seven "key ingredients" namely Private Property, Capital, Commerce, Credit, Writing, Money and Arithmetic as important issues to be addressed by bookkeeping system to be fully developed accounting

system. He referred existing bookkeeping as underdeveloped accounting system because of not considering all seven identified ingredients together in maintaining books of account. Nonexistence of these factors in recording business transaction was felt by professionals and social scientists which gave an important push for innovation and development in the double entry bookkeeping system.

Sihag, Balbir S. put forward, (2004) that Kautilya, a 4th century B.C. economist, wrote *The Arthashastra* and the book number 15 of *Arthashastra* contains one chapter about 'The Method of Science' in which he recognized the importance of accounting methods in economic enterprises. He emphasised on proper measurement of economic performance which is absolutely essential for efficient and profitable allocation of resources and is considered as an important source of economic development. He developed bookkeeping rules for economic data and the procedures for preparing periodic income statements, budgets and performing independent audits. His contribution to accounting may be classified under four headings: (i) the development of principles of accounting, (ii) the specification of the scope and methodology of accounting, (iii) the codification of financial rules and regulations and the creation of an organizational structure to reduce the potential for conflicts of interest, and (iv) the role of ethics in the restraint of fraudulent accounting (often spawned by excessive greed), in the maintenance of law and order, the efficient allocation of resources, and the pursuit of happiness.

Subramanian (1980) opined that Kautilya was aware that efficient allocation of resources depended on appropriate measurements of profits, which were critical to enhancing economic growth. He not only emphasized the estimation of expected profits for direction but also insisted on strict adherence to the prescribed uniform standards and accurate measurements of actual profits.

Janek Ratnatunga Despite its theoretical superiority, the Activity-Based Costing (ABC) model has had only moderate success in replacing the traditional volume-based absorption costing models in complex organizations worldwide. Even in organizations that have launched ABC projects, the implementations often do not sustain. In response to this general lack of enthusiasm worldwide for ABC, accountants developed the Time-Driven Activity-Based Costing (TDABC) model as an alternative cost allocation model.

DATA ANALYSIS

TECH MAHINDRA REVENUE COST

Table-I (Rs in corers)

SL.NO	PARTICULAR	Cost estimated for the 2021-2022		Actual for the year 2021-2022	
1	Sales		%		%
	Fixed (Finished goods)	22548.7	225.48	22027.1	220.27
	Variable (Spar parts)	3187.84	31.87	3054.54	30.54
	Fuel price adjustment	209.68	2.09	204.51	2.04

	Own consumption	20.25	0.20	17.28	0.17
	Total of 1	25966.5	259.66	25303.4	253.03
2	Average intensives	2789.65	27.89	2657.84	26.57
3	Other income	450.25	4.50	446.38	4.46
	GRAND TOTAL (1+2+3)	29206.4	292.06	28407.6	284.07

INTERPRETATION

The data pertaining to the generation and consumption have been obtained from the year 2021-2022 and represented in table -1. The aspect included are total generation in (crores Rs) and utilization for auxiliary consumption respectively.

During the year 2021-2022 the sales, fixed costs, variable cost, own Consumption was decreased. When the estimated cost so sales consumption is 0.17 respectively.

During the year 2021-2022 the average intensive is 26.57 % the other Income also 4.46 % respectively.

Finally with regard to the result in revenue cost of TECH MAHINDRA totally 284.07 % in the year 2021-2022 respectively.

TECH MAHINDRA REVENUE COST

TABLE-I

(Rs in crores)

SL.NO	PARTICULAR	Cost estimated for the 2020-2021		Actual for the year 2020-2021	
1	Sales				
	Fixed (Finished goods)	22024.32	220.24	20446.19	204.46
	Variable (Spar parts)	3531.40	35.31	3021.95	30.22
	Fuel price adjustment	239.71	2.40	199.20	1.99

	Own consumption	23.54	0.24	18.91	0.19
	Total of 1	25818.97	258.19	23686.25	236.86
2	Average intensives	2837.31	28.37	2519.56	25.20
3	Other income	487.56	4.88	398.38	3.98
	GRAND TOTAL (1+2+3)	29143.84	291.44	26604.19	266.04

INTERPRETATION

The data pertaining to the generation and consumption have been obtained from the year 2020-2021 and represented in table -1. The aspect included are total generation in (crores Rs) and utilization for auxiliary consumption respectively.

During the year 2020-2021 the sales, fixed costs, variable cost , own Consumption was decreased. When the estimated cost so sales consumption is 0.19 respectively.

During the year 2020-2021 the average intensive are 25.20 % the other Income also 3.98 % respectively.

Finally with regard to the result in revenue cost of TECH MAHINDRA totally 266.04 % in the year 2020-2021 respectively.

TECH MAHINDRA REVENUE COST

TABLE-I (Rs in corers)

SL.NO	PARTICULAR	Cost estimated for the 2019-2020		Actual for the year 2019-2020	
1	Sales		%		%
	Fixed (Finished goods)	20987.3	209.873	20032.8	200.33
	Variable (Spar parts)	3854.24	38.5424	3467.74	34.68
	Fuel price adjustment	40.24	0.4024	33.43	0.33
	Own consumption	62.21	0.6221	52.82	0.53
	Total of 1	24944	249.44	23586.8	235.86

2	Average intensives	5220.36	52.2036	4546.5	45.47
3	Other income	425.67	4.2567	347.46	3.47
	GRAND TOTAL (1+2+3)	30590.1	305.901	28480.8	284.81

INTERPRETATION

The data pertaining to the generation and consumption have been obtained from the year 2019-2020 and represented in table -1. The aspect included are total generation in (crores Rs) and utilization for auxiliary consumption respectively.

During the year 2019-2020 the sales, fixed costs, variable cost , own Consumption was decreased. When the estimated costed so sales consumption is 52.82 respectively.

During the year 2019-2020 the average intensive are 45.46 % the other Income also 3.4746 % respectively. Finally with regard to the result in revenue cost of TECH MAHINDRA totally 284.808 % in the year 2019-2020 respectively.

TECH MAHINDRA REVENUE COST

TABLE-II (Rs in corers)

SL.NO	PARTICULAR	Cost estimated for the 2018-2019		Actual for the year 2018-2019	
1	Sales		%		%
	Fixed (Finished goods)	20217.3	202.173	19796.9	197.97
	Variable (Spar parts)	2845.2	28.452	2500.51	25.01
	Fuel price adjustment	35.61	0.3561	28.2	0.28
	Own consumption	59.67	0.5967	41.36	0.41
	Total of 1	23157.7	231.577	22367	223.67
2	Average intensives	4858.2	48.582	4527.23	45.272
3	Other income	320.51	3.2051	238.27	2.383

	GRAND TOTAL (1+2+3)	28336.4	283.364	27132.5	271.325
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INTERPRETATION

The data pertaining to the generation and consumption have been obtained from the year 2018-2019 and represented in table -2. The aspect included are total generation in (crores Rs) and utilization for auxiliary consumption respectively.

During the year 2018-2019 the sales, fixed costs, variable cost, own Consumption was decreased. When the estimated cost so sales consumption is 41.36 respectively.

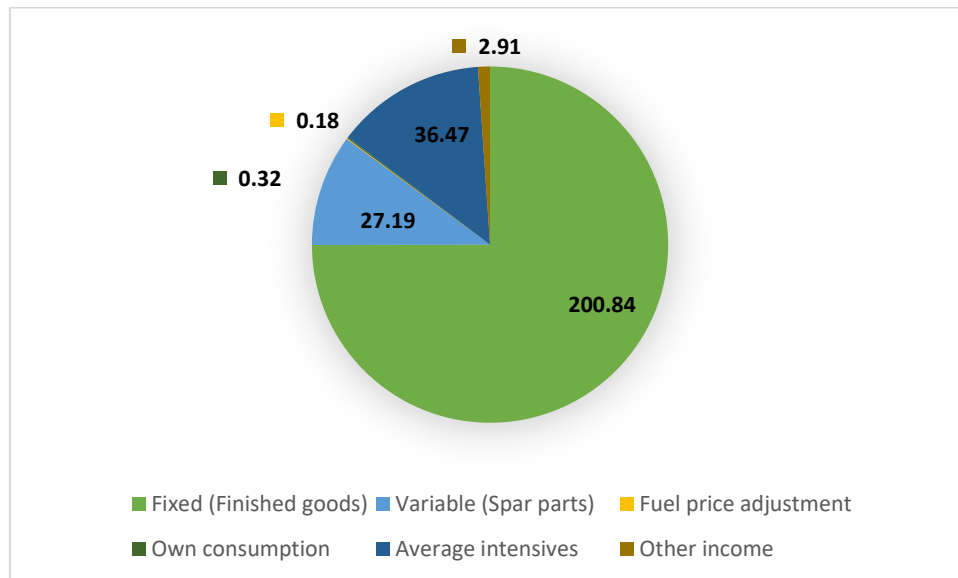
During the year 2018-2019 the average intensive is decreased 45.27 % the other Income also decreased 2.38 % respectively.

Finally with regard to the result in revenue cost of TECH MAHINDRA totally decreased 271.325 % in the year 2018-2019 respectively.

TECH MAHINDRA REVENUE COST

TABLE-III (Rs in corers)

SL.NO	PARTICULAR	Cost estimated for the 2017-2018		Actual for the year 2017-2018	
1	Sales		%		%
	Fixed (Finished goods)	20583.7	205.837	20084.4	200.84
	Variable (Spar parts)	3025.31	30.2531	2718.57	27.19
	Fuel price adjustment	20.67	0.2067	18.2	0.18
	Own consumption	42.25	0.4225	32.48	0.32
	Total of 1	23671.9	236.719	22853.6	228.536
2	Average intensives	4195.81	41.9581	3647.23	36.47
3	Other income	408.51	4.0851	290.69	2.91
	GRAND TOTAL (1+2+3)	28276.2	282.762	26791.6	267.92



INTERPRETATION

The data pertaining to the generation and consumption have been obtained from the year 2017-2018 and represented in table -3. The aspect included are total generation in (crores Rs) and utilization for auxiliary consumption respectively.

During the year 2017-2018 the sales, fixed costs, variable cost, own Consumption was decreased. When the estimated cost so sales consumption is 32.48 respectively.

During the year 2017-2018 the average intensive is decreased 36.4723 % the other Income also decreased 2.90 % respectively.

Finally with regard to the result in revenue cost of TECH MAHINDRA decreased 267.916 % in the year 2017-2018 respectively.

TECH MAHINDRA

Operational Expenditure Cost for the Year 2021-2022

TABLE – I (Rs in crores)

SL. NO	PARTICULAR	COST ESTIMATED FOR THE 2021-2022		ACTUAL FOR THE YEAR 2021-2022	
		AMOUNT	RS/MT	AMOUNT	S/MT
1	VARIABLE COST	3187.84	318.78	3054.54	305.45
2	OPERATIVE MAINTENANCE COST	295.68	29.56	254.85	25.48
3	FINANCE CHARGES				

	Deprecation	1900.00	190.00	1807.37	180.73
	Interest on fixed capital	252.31	25.23	220.79	22.07
	Total of – 3	2052.31	205.23	2028.19	202.81
	GRAND TOTAL (1+2+3)	4905.83	490.58	4637.55	463.75

INTERPRETATION

Observed from the above table that the operational expenditure cost of TECH MAHINDRA in the year 2021-2022. Maintenance, employee cost, stationary & general expenses, rebate and share of other expenses is all are fluctuating with the expenses of the year 2021-2022. However, the total operating maintenance costs are 25.48 % increasing respectively.

In finance charges depreciation and interest on fixed capital, has been included The total finance charges recording increasing of 202.81 % in the year 2021-2022 respectively.

The overall costs result of TECH MAHINDRA are earning more profits.

TECH MAHINDRA

Operational Expenditure Cost for the Year 2020-2021

TABLE – I (Rs in corers)

SL. NO	PARTICULAR	COST ESTIMATED FOR THE 2020-2021		ACTUAL FOR THE YEAR 2020-2021	
		AMOUNT	RS/MT	AMOUNT	S/MT
1	VARIABLE COST	3531.40	353.20	3021.95	302.20
2	OPERATIVE MAINTENANCE COST	282.59	28.25	235.32	23.53
3	FINANCE CHARGES				
	Deprecation	1952.36	195.23	1881.75	188.20
	Interest on fixed capital	252.31	25.23	203.62	20.36
	Total of – 3	1804.67	180.46	2045.37	204.53

	GRAND TOTAL (1+2+3)	5320.66	531.86	4602.64	460.26
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INTERPRETATION

Observed from the above table that the operational expenditure cost of TECH MAHINDRA in the year 2020-2021. Maintenance, employee cost, stationary & general expenses, rebate and share of other expenses is all are fluctuating with the expenses of the year 2020-2021. However, the total operating maintenance costs are 23.53 % increasing respectively.

In finance charges depreciation and interest on fixed capital, has been included

The total finance charges recording decreasing of 204.53 % in the year 2020-2021 respectively.

The overall costs result of TECH MAHINDRA are earning more profits.

FINDINGS

- The year 2021-2022 the average intensive is 26.57 % the other Income also 4.46 % respectively.
- The year 2020-2021 the average intensive is 25.20 % the other Income also 3.98 % respectively.
- The year 2019-2020 the average intensive is 45.46 % the other Income also 3.4746 % respectively.
- The year 2018-2019 the average intensive is decreased 45.27 % the other Income also decreased 2.38 % respectively.
- The year 2017-2018 the average intensive is decreased 36.4723 % the other Income also decreased 2.90 % respectively.
- The year 2021-2022. However, the total operating maintenance costs are 25.48 % decreasing respectively.
- The year 2020-2021. However, the total operating maintenance costs are 23.53 % decreasing respectively.
- The year 2019-2020. However, the total operating maintenance costs are 20.39 % decreasing respectively.
- The year 2018-2019. However, the total operating maintenance costs are 19.51 % decreasing respectively.
- The year 2017-2018. However, the total operating maintenance costs are 4.81% decreasing respectively.

SUGGESTIONS

Planning has become the primary function of management and most of the planning relates to individual and individual proposals. Costs are nothing but his expressions, largely in financial terms, cost control has, therefore become and essential tool of management for controlling and maximizing profits.

- The company objectives of the organization and how they can be achieved through cost control.
- Timetables for all stages of costing follow.
- Reports, statements, forms and other records to be maintained.
- Continuous comparison of actual performance with coasted performance.

Based on the provided data, here are some suggestions or observations:

1. The average intensity of income increased from 36.47% in 2017-2018 to 45.46% in 2019-2020, indicating significant growth during that period.
2. Other income as a percentage remained relatively stable, ranging from 2.38% to 4.46% during the years 2017-2018 to 2021-2022.
3. In terms of operating maintenance costs, there was a consistent decrease over the years, with the most significant reduction of 25.48% occurring in 2021-2022.
4. The year 2018-2019 marked a notable decrease in both average intensity (45.27%) and other income (2.38%).
5. While average intensity experienced fluctuations, it generally exhibited an upward trend over the years, except for 2018-2019 and 2021-2022.

CONCLUSIONS

Every organization has pre-determined set of objectives and goals, but reaching those objectives and goals only by proper planning and executing of the plans economically.

The TECH MAHINDRA is objectives of planning promoting and organizing an integrated development of Auto motors Company.

The corporation mission of TECH MAHINDRA is to make available and quality service in increasingly large quantities, the company will spear head the process of accelerated development of this sector by expeditiously.

The organization needs the capable personalities as management to lead the organization successfully, the management makes the plans and implement of these plans are expressed in terms of cost and cost control.

The TECH MAHINDRA has cost process in two stages. One is the capital expenditure cost and another is operating maintenance cost, the capital expenditure cost shows the list of capital projects selected for investment along with their estimated cost, operating & maintenance cost refers to the repairs & maintenance costs, the special costs are rarely used in the organization like long-term costs, research & development cost and cost for consultancy.

It is to make available and quality work efficient resources and implementation of sophisticated technology and generation and also creating ambience of collective working of its employees.

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