Efficacies of Cost Management Practices Towards Achieving Business Objectives a Perspective Among Select MSME'S in Coimbatore District

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ABSTRACT

Cost management should be regarded as a process requiring the integration of separate discipline and involvement of the internal and external experts. Effective cost management requires the implementation of methodologies and steps that are repeatable and can be integrated with organization goals. For MSMEs to compete effectively in the global market, the cost of a product should be reduced by increasing productivity, by reducing manufacturing costs at the shop floor. The need is to see the cost management practices employed and the efficacies of such practices, which will enhance the opportunity to improve the decision-making process of the MSMEs. This paper studies the significant differences among efficacies of existing cost management practices used by the enterprises and establishes a functional relationship among cost management practices, efficacy, and action to achieve business objectives. In the process, Statistical tools like ANOVA, Regression Analysis, Inter-correlation matric, Path – Coefficient Analysis were used.

1. Introduction

Cost Management System is a management planning and control system with the primary objective of producing quality goods and services at the lowest possible cost. It is oriented towards innovative and better management of the cost of men, material and minutes (Time). Any measure that involves an element of cost which facilitates to evaluate the long term effects of a product or process assumes significant at strategic level.

Cost is universal and most highly visible performance metric for indicating project success, which are always prioritized by top management and control professionals. Cost management should be regarded as a process requiring the integration of separate discipline and involvement of the internal and external experts. Effective cost management requires the implementation of methodologies and steps that are repeatable and can be integrated with organization goals.

The Micro, Small and Medium Enterprises (MSMEs) play a pivot role in the economic and social development of the country. They also play a key role in the development of the economy with their effective, efficient, flexible, and innovative entrepreneurial spirit. The MSME sector contributes nearly 8 percent of national GDP besides, significantly contributing to the country's manufacturing output, employment, and exports and is credited with generating the highest employment growth as well as accounting for a major share of industrial production and exports. The above reasons make MSMEs as the backbone of the Indian economy.

1.1 Problem Statement

Traditional Cost Management techniques primarily relate to analysis of operating data, it has a tendency to provide information that is often late, irrelevant and misleading (Andrew Hughes, 2011).

It uses output unit related cost drivers to allocate overhead, these systems are more likely obsolete when a large proportion of firms overhead is not directly related to its output volume (Siu Y.Chan et al. 2003). It is in no way connected with the operational control mechanism pursued by the companies to ascertain their effectiveness in advanced manufacturing environment (Lucas 1997; Hansen and Mowen 2002). Thus, companies in today's intensely competitive environment may find traditional costing to be less relevant for cost control and performance evaluation (Kaplan an Johnson, 1987; Monen and Lee, 1993; Ferrara 1995) . Instead, to meet the intensely, competitive, global business environment, companies should use tools such as Quality costing, Activity Based Costing, Kaizen Costing, Standard Costing and target costing. (Gunasekaran, et.al 1999; Robert Luther et.al 2011; Wien Hsien Tsaiin 1998; Curtis Walker et al 2000; John C. Lere 2000; Lyall and Graham 1993) Such tools are said to enhance the ability of corporations to better meet their strategic objectives and also enable these companies to compete nationally or globally.

The MSMEs are under tremendous pressure to be cost conscious as they ought to bother about generating the precise costing information which can be of great help in the competitive scenario. Considering the growth of MSME's mediated by Prime Minister's Make in India/Start – up India Schemes an attempt has been made to evaluate the efficacies of cost management practices and to establish a functional relationship for achieving business objectives, among MSMEs in Coimbatore region in South India.

1.2 Purpose of the Study

Globalization has made cost effectiveness in product delivery an absolute 'Must' for remaining competitive in the global market. MSMEs are no exception to thatThe purpose of the study is to measure the efficacy of existing cost managementpractices and to establish a functional relationship between change drivers with existing cost management practices for achieving business objectives.

1.3 Research Questions

Given the background, the research questions framed for the study are as below;

○ What is the effectiveness of the existing cost management practices among MSME's

○ Does the firms were able to achieve its business objectives using cost management techniques.

1.4 Objectives

To answer the above research questions the following objectives were framed;

○ To Study the significant differences among efficacies of existing cost management practices used by the enterprises

○ To establish a functional relationship among cost management practices, efficacy, and action to achieve business objectives.

2. Theoretical Background & Hypotheses

Here the authors have attempted to review the literature on cost management with particular relation to micro, small, medium enterprises in India and abroad. This has facilitated the researcher to understand the research gap which was useful in constructing the measurement instrument (Schedule). The relevant articles have been summarized below.

2.1 Use of Traditional Costing

Lyall (1990) found that of the 423 companies that they surveyed 76% claimed that they used traditional costing.Joshi, (2001) specified that in India, for example, 68% of the 60 firms surveyed still use traditional costing techniques. Drury (1993)reported 73% of the respondents using traditional costing.Ghosh (1987)found that 47% of the companies surveyed used the traditional costing system in Singapore

H_1 There is a significant difference among the cost management practices adopted by MSME's

2.2 Use of Strategic Cost Management Techniques

Andrew Hughes (2011)says, use of Activity based costing helps business understands its business processes in detail, the cost of process failures, the relationship of processes to customers, the profitability of customer segments and the affordable amount that can be spent on influencing the preferred customer groups.

Gunasekaran, et al. (1999) The authors have suggested to shift for ABC under the following criteria i.e timing, implementation, the factors against the implementation of ABC and conditions favouring the applications of ABC. Wien Hsien Tsaiin (1998)the author concludes by saying that ABC uses nested activity centres to create a multi-tier COQ reporting system to meet various management's information needs and to support COQ responsibility accounting. Curtis Walker et al. (2000) has explained a systematic approach to activity based costing of the production planning activity in the book manufacturing industry using the principles of activity based costing.. He concludes that, this industry can now effectively apply a cost to activities of the planning process for each individual job as a direct cost, rather than an indirect cost.**Amit Kumar Arya** *et al.*Specifies,impacts of kaizen in a small scale industry of India he deduces that

implementation of Kaizen has tremendous impacts on the production techniques and lead times.

H_1 There is a significant difference among efficacies of existing cost management practise used by the enterprises.

H_1 There is a significant difference among objectives planned through implementation of cost management actions by enterprises.

The data were collected through structured schedule, informal interviews and analysed through statistical tools like Frequency analysis, Weighted Average& ANOVA analysis , and results interpreted. The Study is of analytical in nature and the adopts the convenience sampling technique thusensuring the sample frame represents the Universe, thus,textile and garments, pumps and motors, automotive spares, FMCG, wet grinders and other miscellaneous industries, were considered

The number of interview schedule distributed were 110, were 10 instruments were rejected on account of incompleteness and rest were included for analysis. Thus, the total sample size were 100 respondents who were represented by MSME's owner's, or senior officials who are competent enough to answer the questions with right answers.

The schedule were distributed across the sample industries initially, later after getting an appointment or at the convenience of the respondents, one of the author's visited their offices to get the responses filled, and complete facilitation were offered to the respondents to have an unbiased responses. The filled in schedules were thoroughly screened for its omissions and inadequate answers and were summarily discarded from the analysis.

1.6 Results, Discussions and Analysis

The author's applied frequency analysis to understand the demographics of MSMEsuch as company's years of existence, annual turnover, degree of competition, employment structure, business classification, nature of the product line. It also depicts the extent with which MSME's have a structured cost accounting system in place.

1.6.1 Demographics of MSME under the Study

Table No 1. Demographic Analyisis of Msme's In Coimbatore District.

Variables	Categories	Per cent
1. Years of existence	1-5 Years	37%
	6-10 Years	41%
	More than 10 Years	22%
2. Annual turnover	Less than Rs. 50 Lakhs	75%
	Rs. 50-100 Lakhs	24%
	Rs. 100-150 Lakhs	1%
3. Business Classification	Small Scale	84%
	Medium Scale	15%
	Micro Scale	1%
4. Employment Structure	1-100	84%
	101-500	15%
	501-1000	1%
5. Degree of Competition	To some extent	81%
	To a great extent	16%
	Not at all	3%
6. Product Line	Textiles & Garments	49%
	Pumps & Motors	18%
	FMCG	7%
	Automotive Spare Parts	8%
		8%
	Wet Grinders	10%
	Others	
7. Implementation of Cost Management System	Yes	95%
	No	5%

Source: Primary source

From the above table 1, it shows that 41**%** of the MSME's are in the range of 6-10 years of existence. 37% of industries in 1-5 years of existence and the rest 22% are having more than 10 years of existence. It shows that **75%** of the MSME's fall in an annual turnover of less than 50 Lakhs. 24% of the MSME's fall in the range of 50-100 Lakhs annual turnover and the rest 1% in the 100-150 Lakh range. The business classification shows 68% of the industries fall in the small scale classification. While 24% fall in the medium scale classification and rest 8% in the micro classification, the employment structure means the level of the workforce in the industry. It is divided under 4 different segment. 84% of the industries are having majority of 1-100 employees range. 15% of the companies are having employees in the 101-500 range and the rest 1 company from the data collected has an employee structure in 501-1000 range. 81% of the companies believe that they are facing competition to some extent. 16% of the companies are actually in the competition which is to a great extent and 3% of the companies they state that there is no degree of competition for them, from the researcher infers that they term themselves in to the monopoly market category. ,

The authors identified some information relating to the type of businesses the MSMS's have covered according to the sample taken. 49% of the respondents are having business in textiles & garments. 18% are pumps & motors, 8% of the once are FMGC as well as 8% Automotive spare parts 7% are wet grinders and the rest 10% are in the other category. it shows that 95% of the company do have a cost accounting system in place and 5% of the firms do not have any cost accounting system at all, the costing methods and techniques used by some of the MSME' are Lean Costing, Standard Costing, Target costing and Resource consumption cost accounting. However, most of the firms were found using traditional costing.

1.6.2 Weighted Average Analysis of Cost Practices Used In Msme's

To estimate and compare the overall mean scores on the Cost Management practices among the enterprises, weighted average analysis is performed using three rating scale and assigning score 1 for 'not at all'; 2 for 'to some extent' and 3 for 'to great extent' and the results are presented in the following table: and H_1, there is significant difference among the cost management practices among the enterprises.

Table No 2. Anova Table Showing Cost Management Practices Used in the Msme's.

Source of variation	Degrees of Freedom	Sum of Square	Mean Square	F-Cal	F-Tab
Between groups	7	152.17	16.90	34**	2.64
Within groups	792	393.79	0.49		

**- Significant at 1 % level

Table No 2.1. Cost Management Practices Currently in Use.

S. No	Cost Management Practices	Weighted Average Score	Rank
1	Classification of Cost	1.72	5
2	Preparation of Cost Sheet	2.09	4
3	Absorb inventory movements	1.93	7
4	Cost & Profitability Analysis Measured	2.49	1
5	Cost reduction & Cost control in place	0.97	8
6	Budgeting & Variance Analysis	1.61	6
7	Involving employees in Cost Management	2.24	2
8	Waste/scrap/spoilage management mechanism in place	2.10	3

Source: Computed data

From the table no. 2 & 2.1 the F is significant, hence it is inferred that there is difference in the mean scores among cost management practices used by MSME's. Therefore, the Null hypothesis is rejected. Further, the author's has also done the mean scores of cost management practices used by MSME's which is given in above table 2.1, it is found that, the mean score is higher for 'Cost & Profitability Analysis Measured' and the mean score is least for 'Cost reduction & Cost control in place'. Thus, it is understood that the MSME's has given top priority to cost & profitability measurement which is a good sign, at the same time, there need to be more awareness created for the officials through professional training given on cost reduction and cost control as it has been ranked as the least.

1.6.3. Weighted Average & Anova Analysis to Find Out the Efficacy of Existing Cost Management Practices Used in the Msme's

Following hypothesis is developed for which the author's use weights to do the weighted average ANOVA analysis and the H_1, there is a significant difference among Efficacies of existing cost management practices used by the enterprises.

Table No 3. Analysis of Relationship using ANOVA on the Efficacy of Existing Cost Management Practices used in MSME's

Source of variation	Degrees of Freedom	Sum of Square	Mean Square	F-Cal	F-Tab
Between groups	11	124.67	11.33	22.97**	2.25
Within groups	1188	586.00	.49		

**- Significant at 1 % level

Since the F is significant, there is difference in the mean scores among Efficacies of existing cost management practices used by enterprises thus null hypothesis is rejected. The mean scores of cost management practices used by enterprise are furnished below:

Table No 3.1. Efficacy of Existing Cost Management Practices.

S. No	Efficacy of Existing Cost Management Practices	Weighted Average Score	Rank
1	Integrated with Planning & Budgeting	2.43	1
2	Cost Awareness among all levels of employees	1.97	5
3	Cost Information supportive to strategic decisions	1.43	12
4	Interfaced with Information Technology	2.31	2
5	Operational excellence ensured	1.91	7
6	Cost Management focused towards customer expectations	1.60	10
7	Cost Management system designed to absorb uncertainities	2.29	3
8	Cost Structure best in the Industry	1.96	6
9	It has permanently changed the way the firm will operate	1.55	11
10	Actually harmed the firm's ability to achieve its short term goals.	2.27	4
11	Did more harm than good	1.86	8
12	Viewed as having helped the organization much more	1.62	9

Source: Computed data

It is seen from the above table that the mean score of Efficacies of existing cost management practices used by the enterprises ranged from 1.43 to 2.43 and it is higher for 'Integrated with Planning & Budgeting' and is least for 'Cost Information supportive to strategic decisions'. Hence it is observed that, firms do integrate cost management with their planning and budgeting process at the same time the firms had been found to be lacking on cost information supportive to strategic decisions. It is also inferred that the present cost management practices by the MSME's are not so professional in the context of the recent developments of robust cost management practices and philosophies. Hence, it is suggested MSME's should adopt and execute such practices through benchmarking.

1.6.4 Actions Planned to be achieved through Cost Management

The firms were asked whether they were having any specific objectives which they would like to achieve through cost management system and the results are tabulated in table no.4 and the H_1- there is significant difference among actions planned and cost management actions by the enterprises.

Table No.4

Source of variation	Degrees of Freedom	Sum of Square	Mean Square	F-Cal	F-Tab
Between groups	10	192.03	19.20	47.10**	2.32
Within groups	1089	443.96	.40		

- Significant at 1 % level

Since the F is significant that there is difference in the mean scores of objectives planned through cost management actions by enterprises. The mean scores of objectives planned through implementation of cost management action are furnished in the table given below:

Table No 4.1.Actions Planned to Be Achieved Through Cost Management in the Next One Year.

S. No	OBJECTIVES	Weighted Average Score	Rank
1	Foster Cost Management Culture	2.44	2
2	Organizational Restructuring	2.09	5
3	Eliminate Process Redundancies	1.42	10
4	Drive Asset Productivity	2.48	3
5	Reduce Operating Costs	1.92	7
6	Improving Business Potential	1.45	9
7	Increase Value to customers	2.42	4
8	Quality Initiatives	1.90	8
9	Mergers/Acquisitions/Amalgamations	1.39	11
10	Increase Profitability	2.53	1
11	New Technologies	1.94	6

Source: Computed data

It is seen from the above table that the mean score of objectives planned through implementation of cost management actions by enterprises ranged from 1.39 to 2.53 and it is higher for 'Increase Profitability' which is the prime concern of the MSME's and at the same time they have the universal thought in words and spirit to foster cost management culture. At the same time, the mean score is least for 'Mergers/Acquisitions/Amalgamations' which it seems is not of their immediate concern.

1.6.5 Relationship Among Cost Management Practices and the Actions Planned to Achieve Business Objectives

The authors have attempted to make out a step wise multiple regression analysis where objectives planned to achieve in future is considered as (y), with set of independent variables namely $x_1, x_2, \ldots\ldots x_n$. The following regression model is fitted for performance.

$$y = b_o + b_1 x_1 + b_2 x_3 + b_3 x_3 + \ldots\ldots$$

Where, $b_1, b_2, \ldots B_4$ are partial regression coefficients, bo-constant and the results are presented in the following table.

x_1- cost management practices used in the organization

x_2-actions taken by the company in order to achieve the business objectives

x_3- annual turnover

x_4- employment structure

Table No 5.Relationship among cost management practices and the actions planned to achieve business objectives in next 12 months.

variables	Regression coefficient	Standard Error	T-value (d.f = 95)	R^2
Constant	0.22	2.19	0.10	.583
Cost management practiced (x_1)	0.58	0.13	4.58**	
Action taken (x_2)	0.89	0.22	4.06**	
Annual turnover(x_3)	2.19	0.75	2.93**	
Employee structure (x_4)	-1.71	0.86	-2.00*	

**-: significant at 1 % *-significant at 5 %

Regression Fitted: y = 0.22 + 0.58 x1 + 0.89 x2+2.19 x3– 1.71 x4

Table No 5.1.Analysis of Variance for Regression

Source	S S	D F	M S	F
Regression	709.90	4	177.47	33.18**
Residual	508.06	95	5.35	

-- Significant at 1 % level

The Step wise multiple regression model indicated that out of the explanatory variables under study, four variables namely the practices, action taken during the past, annual turnover and employment structure significantly contributing towards actions planned to achieve in future (Y) by the enterprises. The analysis of variance of multiple regression model indicates the overall significance of the model fitted. The coefficient of determination R^2 value showed that these variables put together explained the variations of Y to the extent of 58.3 per cent.

1.6.6 Inter-Correlation

Interclass correlation is a descriptive statistic that can be used when quantitative measurements are made on units that are organized into groups. While it is viewed as a type of correlation, unlike most other correlation measures it operates on data structured as groups, rather than data structured as paired observations.

Inter-Correlation Matrix: This is calculated from a cross tabulation model and it shows how statistically similar are all pairs of variables. The closer the score is to 1 the better the correlation between one or two variables. The table below shows the inter correlation between the following independent variables (x) and the dependant variable which is denoted by Y.

x_1- Cost Management Practices Used, x_2- Efficacy of Cost Management Practices, x_3-Actions taken in the last 12 months to achieve business objectives., x_4-Annual Turnover, x_5- Employment Structure, Y- Business Objectives planned

to be achieved through Cost Management actions in next 12 months (dependent variable)

Table No 6. Inter-Correlation Matrix.

	Cost Management practices used	Efficacy of cost management practices	Actions taken in last 12 months to achieve business objectives	Annual turnover	Employment structure	Business Objectives planned to achieve in cost management actions in next 12 months.
Cost Management practices used (X1)	1.00					
Efficacy of cost management practices (X2)	0.61	1.00				
Actions taken in last 12 months to achieve business objectives (X3)	0.70	0.62	1.00			
Annual turnover (X4)	0.13	-0.06	0.01	1.00		
Employment structure (X5)	0.17	-0.01	0.10	0.73	1.00	
Objectives planned to achieve in cost management actions in next 12 months.(Y)	0.70*	0.57*	0.66*	0.20	0.13	1.00

*Significant at 5% level

It is seen in table 6 that from the inter-correlation the independent variables namely cost management practices used in the organization (x_1), the efficacy of Cost management practices (x_2), Action taken in past in order to achieve business objectives (x_3), Annual Turnover (x_4) and Employment Structure (x_5) the following three explanatory variables viz., the Practices, Efficacies and Actions taken in the past are significantly and positively correlated with the dependent variable **(Y) .** Hence the Management of MSME's has to concentrate on the discussed identified dependent variable with at most care for the next 12 months' period in order to achieve its business objectives.

1.6.7 **Path Coefficient Analysis**

The path coefficient analysis segregates the total correlation of each independent variable with the dependent variable Y into direct response and indirect response via other independent variables.

The direct effect of each of the explanatory variables on the dependent variable and the indirect effect of each explanatory variable on the dependent variable through other explanatory variables are furnished in the Table No.7. The diagonal elements in each row indicate the direct response of the independent variables on the dependent variable (Y). The rest of the elements in each row indicate the indirect response of the independent variable on the dependent variable Y and the sum in each row indicates the total response of independent variable on the dependent variable.

Table No7. Direct & Indirect Effect of Explanatory Variables on Y (dependent variable)

	X1	X2	X3	X4	X5	Y
X1	0.37	0.10	0.22	0.04	-0.03	0.70
X2	0.22	0.17	0.20	-0.02	0.00	0.57
X3	0.26	0.11	0.31	0.00	-0.02	0.66
X4	0.05	-0.01	0.00	0.30	-0.14	0.20
X5	0.06	0.00	0.03	0.22	-0.19	0.13

Bold figures Significant at 5 % level.

It is seen from the above table .7 that among the explanatory variables, the variable Cost management practices used in the organization, the Efficacy of cost management practices, Action taken in past in order to achieve business objectives, had higher positive indirect effect on Y. Hence the three variables viz., the practices, the efficacy and action taken are the important contributing variable for the MSME's to carry on objectives planned to achieve cost management actions in next 12 months

Summary of Findings

• The mean score of cost management practices used by the enterprises ranged from 0.97 to 2.49 and it is higher for 'Cost & Profitability Analysis Measured' and is least for 'Cost reduction & Cost control in place'.

• The mean score of Efficacies of existing cost management practices used by the enterprises ranged from 1.43 to 2.43 and it is higher for 'Integrated with Planning & Budgeting' and is least for 'Cost Information supportive to strategic decisions'.

• The prime concern of MSME's is to increase profitability followed by fostering a cost management culture within their organizations.

• The Cost Management practices, action taken during last one year, annual turnover and employment structure significantly contributing to objectives planned to achieve in the future.

• The Management of MSME's to concentrate more on effective execution of cost management practices, actions taken to achieve its business objectives for next one year.

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