

Determinants Effecting Management Accounting Techniques In The Manufacturing Food Sector (FMCG) Of Pakistan

A research paper submitted to the Department of Management Sciences,
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LIST OF ABRIVIATION

CS-Company Size

OS-Organizational Structure

PA-Professional Accountants

IM-Inventory Management

AMAT-Advance Management Accounting Techniques

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Abstract

Purpose of the study: The objective of this study is to highlight the importance of number of factors which stops the organization in its adjustment of management accounting techniques (MATs) in the manufacturing sector of Pakistani (FMCGs) firms.

Research method/sampling: For this purpose primary statistics has been taken from the professional accountants and staff of the listed food manufacturing companies. This research paper is based on the random sampling technique as for the collection of data company accountants has been picked randomly for the sample companies. Seven independents are selected to find the impact on management techniques.

Findings of the research: The hypothesis suggest that the size of the organization, professional accountants, market competition, inventory management and advance management accounting techniques (AMAT) are positively related with the dependent variable MATs. These five variables are found to be significant with the MATs.

Practical implications of the research: Findings of this research show that there is a significant impact of variables on the choice of the firm while they are electing management counting technique in the manufacturing sector of Pakistan. The research has revealed that the companies with small product portfolio adopt different management accounting techniques as compared to large Multinational Corporation. The main reason found behind that the suitability of certain internal and external factors which will affect the decision of the firm.

Keywords: Advance management accounting techniques (AMATs), Management accounting techniques (MATs), size of the organization, Organizational Structure (OS), Professional Accountants.

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Chapter 1

Introduction

1.1 Problem background

Research on the topic management accounting techniques (MATs) remained a continuous development process in the field of accounting. However the academicians have shifted their research focal point from one variable to the other by examine the effect of that variable on a particular accounting technique selected by them for the research purpose. Malcolm and Hadrian (2011) have also identified the relationship between the composition of an organization and its routine activities with their choice of application of MATs in their organization. They have also elaborated their findings by defining the structure of organization in terms of its hierarchical design and its ability to response external challenges with the help of strategic management accounting tools. Waldron (2005) relates the choice of the firm to select management accounting technique with the environment factors which are technological changes and accordance of competition in the market.

The focus on the market competition allows the company to construct its contingency plans to survive in the profitability race with competitors. Akber allahyari (2011) defines this competition in the form of globalization and technological changes which reduces the time and efforts of competitors to produce products of the choice of customers and on the affordable price. He further relates the advancement of technology with the factors which delays the decision of the firm to adopt MATs.

“Management accounting practices enable management to obtain relevant information for meaningful decision making”(Alleyne and Weekes-Marshall, 2011, p.52).

Uyar (2010) provided his research work evidence which explains the importance of management accounting techniques for the manufacturing firm in terms of increase in profitability and decrease in the cost and other expenses.

The author further identified the firms that were using traditional accounting methods with their improved company structure had found themselves in a situation where the profit and loss statements were showing zero or negative balance. This is a worse scenario and accurse when the product costing is done with an inappropriate accounting tool. Hence Uyar has also highlighted the mismatch of the current accounting needs of the company with the application of MATs.

On this stage we cannot ignore the fact that there is a notable difference in traditional accounting and advance or to some extend modified management accounting techniques on which the firms are depending for their profitably and growth. Conversely the firm is also bound with the factors which indirectly play a vital role in firm’s decision of selecting management accounting techniques.

In the past researchers have always highlighted the fact that there are few management accounting techniques which are useful for manufacturing firms due to the increased market competition and advance technological changes. In the last two decades manufacturing industry is highly affect with this innovation in management accounting techniques.

Academicians have allocated their remarkable efforts and time to find out the answer to the question that how innovative manufacturing accounting techniques are more profitable for companies as compare to the old techniques. However, it can be possible that the profitability of firm could be increase with some factors directly or indirectly related to the firm itself. The phenomenon that sometimes the adoption of advance techniques is not the catalyst to enhance profitability of the firm rather than the act of firm to select management accounting techniques which best suits its internal and external organization expertise is far more profitable and cost cutting form the manufacturing companies.

It has been observed that manufacturing firms recurring ignores its size and organizational structure while adopting the management accounting techniques. Manufacturing firms sometimes also resist to change its management accounting techniques, according to the dynamic organizational functions, due to the advice if their obsolete professional accountants. Hence within the firm professional accountant or resource which directly involved in accounting decision making plays an important role in the choice of the firm of selecting accounting techniques according to their management style.

Firms who have learn to change their product portfolio according to the market competition and globalization, without changing its management accounting techniques, are more likely to be included in the category of manufacturing firms which do not possess the ability to select management accounting techniques according to their organizational requirements. For instance if a manufacturing was following standard costing since it had been established then they cannot any more stick on the traditional style of costing with their diverse product portfolio.

1.2 Problem Statement

Management accounting techniques enables the management to perform the best possible and suitable solution to their problem associated with the cost structure, product planning, resources evaluation and management decision making in overall activities of the company. The evolution stages of management accounting techniques brought significant changes in management practices of the firm which have also affected the profitability of manufacturing firms. However, few companies have resisted this change process and stick to their traditional management accounting techniques due to which these firms met with their failure in market competition. The downfalls in the profitability of manufacturing firms are not only the result of low productivity of the firm but also caused by few factors unintentionally ignored by the company. These are the independent factors with which firms are highly dependent in taking decisions of selecting management accounting techniques.

1.7 Significance of Study

The generation shift has brought up a tremendous procedural drift in number of manufacturing companies. We have classified these factors in to three major categories which includes the factors related to the **Firms Characteristics** that cannot be ignore while selecting management accounting techniques . The second category moves our attention towards the **External Factors** which includes environmental uncertainties, market competition and customer power. External factors are far more important force that secretly affects the backbone of the company i.e. the customers and its ability to beat competitors. Hence, external factors also play an essential role in shaping company's choice of adopting these techniques. The third and the most technical category which exerts pressure on the decision of the firm to implement

management accounting techniques which are highly compatible with their product portfolio and could also bring growth and prosperity in their company. In this category we have included inventory management process, Complexity of production process (Batch based, continuous, assembly line) and new management process (TQM, JIT).

Our objective is to identify number of factors due to which firms are bound to follow particular management accounting techniques in its company life cycle stages. These are the characteristics of a company which enable or disable it to change its processing methods and cost structure. It is easy to identify that the firm is learning or non-learning organization but our major task is to find out those factors which forbids the firm to get advance management accounting techniques.

1.8 Prospects of Further Research

- This research was conducted only on the listed companies on Karachi Stock Exchange; these include food manufacturing companies as well as confectionaries. Other researchers might target companies listed on the exchange of others cities to collect data.
- Simple Random sampling technique was used for this research, other researchers can use other sampling technique to collect data.
- In this research has identified the resisting factors and also identified the gap in the previous studies that has not been identified up till now for further research.

1.9 Ethical Considerations Involved

This research is being conducted after proper approval and authorization of concern authorities in this matter. It was asked by the organization not to disclose the names of the employees who filled the questionnaires for this purpose there was no requirement to mention names in the questionnaire.

1.10 Introduction of the Organization

Professional accountants and people at managerial level on production sides are selected for this research. These organizations include Pearl Confectionary, Candiland, National Foods, Shezan, Nurus, k&N'S and Unilever's Foods. These organizations manufacture food products. In today's world FMCGs sector food manufacturing companies are making mark by introducing innovative flavors in the market.

These organizations includes combination of new and very old manufacturing companies in this market and has contributed much in it by acting as a facilitator and enabler. Management accounting techniques enable manufacturing organizations to establish efficient work-flow of production activities. However manufacturing organizations are also bound to adopt selective Management accounting techniques due to their organizational characteristics, and some other factors related to its external environment.

1.11 Composition of research paper

This research paper has been divided into six parts in which the first includes the introduction of the topic. The introduction comprises of the background or prior studies on the accordance and necessity of MATs in the manufacturing firm. In this part I have explained the problem statement on which my research will be based. Further room for the prospective researcher has been identified in the first part of this paper with the introduction of organizations included in this research.

The second Chapter contains a pure literature that provides a status of previously done research on these factors which creates hindrance on the decision of the firm in its adoption of management accounting techniques.

Research methods have been included in section three of this paper which includes the nature and kind of research. In this method a complete frame for the analysis part has been provided which defines the ranges of sample and the application of the qualitative models (SPSS).

Analysis Chapter of the research paper considered to be the most essential part due to the scrutinizing of primary data collected through questionnaires and experts opinions. Linear regression method has been used with the help of SPSS (a statistical tool) used for data analysis purpose.

The fifth Chapter discusses the outcome from chapter four and provides evidence of the prior studies which greatly relates to my research studies. The last Chapter concludes this research papers with highly genuine recommendations and with the examination of experiences found during this research work from the sample companies.

Chapter # 2

Literature Review

Prior studies clearly revealed the presence of particular factors that influence the modification in accounting practices of management within the organization. For this topic many authors had focused on the importance of environmental challenges faced by the manufacturing firms during their selection of management accounting techniques.

In current era of business environment there is a lot of competition in business and corporate world. Owners of corporations intended to proceed not only up to the mark but also to achieve higher position in the market of their corporations in every aspect of the business (Sleihat *et al.*, 2012). Management accounting practices (MAP) are very essential to success for the organization and these practices have been used in traditional way in organization (Horngren *et al.*, 2009).

Management Accounting Practices (MAP) includes cost practices, budgeting, and information for decision making, strategic analysis and performance analysis. These practices are using by manufacturing companies and make plans to control cost in different way by utilizing these accounting techniques. There is the need for organizations to get success in the dynamic market. Management accounting practices (MAP) are very essential to success for the organization and these practices have been used in traditional way in organization (Horngren *et al.*, 2009).

Recently in the developing nations MATs are being used for many years in manufacturing and industrial sectors as compared to financial sector (Philmore and Diana, 2011).

Management accounting practices are varied and rapidly used in different organizations. But the most usable MAP is budgeting, reporting, costing and variance analysis (France, 2010).

The organizational structure has been examined on the basis of the environment accrued within the organization. However it is a weak basis to analyze a strong factor of organizational structure because literature includes this factor as an independent variable on which the choice of the firm depends when selecting MATs.

In Pakistan, Maqbool-ur-Rehman (2011) investigated the influence of the use of MAPs on firm profitability using a survey. Product price, quality, differentiation, regulation changes, technology and after-sales service were measurements of conditions of competition. The author identifies the use of accounting techniques in Pakistani environment as a system which allows the firms to reduce their cost, however he has also mentioned that the companies mostly go for old management accounting methods or techniques and reluctant to adopt the new one. For instance, Pakistani companies preferred capital budgeting techniques particularly payback period and return on sales (ROS) to decision making and to evaluate divisional performance.

Rehman (2011) explained the changes in the field of accounting by introducing the term Innovative Management Accounting techniques (IMAP). He has clarified the requirement of the firm to change its MATs according to the changing requirement of the industry and external economic factors. The author has further mentioned the importance of modification of technology which is also an important factor in selection process of management techniques.

In Turkey, Yalcin (2012) used questionnaires to investigate the use of MAPs in manufacturing firms, as well as compare the implementation rates of these practices with

conclusion in earlier readings in Greece, Finland, India, Japan and Australia. He found that traditional MAPs, particularly traditional budgeting and costing practices, had higher adoption rates than contemporary practices like ABC, life cycle costing and target costing had. The adoption rates of both practices in Turkey were higher than those acquired from the previous studies. Production processes in Turkey have been affected by consumer preferences, it is evident that Turkish managers require management accounting practice (MAP) information to be part of their operating structures (Yalcin, 2012).

This may lead to a greater need for management accounting information, to assist with planning, decision making, control and existence of organisations. In transitional economy countries like Thailand, contemporary MAPs like activity based costing (ABC) have been implemented in order to face a changed environment and to meet the need to survive in the economic crisis (Chongruksut and Brooks, 2005).

Following are the classes of the determinants that affect the choice of the firm to identify suitable management accounting techniques.

1. FIRM'S CHARACTERISTICS (Internal factors)

1.1 Size of the firm

Manufacturing firms are more engaged in the development and research activities that which management accounting technique will be more suitably work with their operations. Keeping in view this opinion of the firms this research paper will explain the effect of this factor on the judgment of the firm to choice MATs for their organization size. Waweru (2008) explains

factors related to the specification of the firm as these are the factors which shape the management decision of the firm.

1.2 Organizational Structure

Waweru (2008) provide a evidence with the help of his research work that there is a direct relationship between the design of the company and its ability to select MATs. He has mention that the company with the centralized organizational structure will work more efficiently with accounting techniques as compare to the decentralized organization. As the organization will moves towards decentralization the effectiveness of the MATs will decrease and the firm will take decision more rapidly to move from one accounting method to the other.

There are certain significant factors that will assist organization to decide on an suitable management accounting applications. These factors can either be scientific changes and the communicational structure of an organization. For example, a manufacturing food company may want to change the technology used to a more modern hygienic and efficient way of handling, processing and packaging its food. It may then consider installing a computer based system that mass produces its products. However, the type of qualified personnel that is require to operate such highly complex equipment will influence the type of management accounting practices selected and production costs.

1.3 Professional Accountants (In the sense of Knowledge management)

One of the most important factors that influences the choice of the organization in adopting management accounting techniques are the availably of professional accountants in that organization.

It has been often experienced by the experts that organizations with highly skilled employees tend to fail in its costing and management process due to their usage of obsolete methods of cost and management accounting techniques. This happened because the organization is continuously ignoring the fact that its skilled labor not just only needs to perform their duties but they also require some professional know-how in order to adopt advance methods of management accounting techniques.

This can be further explained by a short example of a manufacturing firm which uses full costing and standard costing in order to calculate the cost of its bulk product portfolio and comes up lots of time consuming and inaccurate uniform results for every product type of portfolio. However, on the other hand we have a firm B which hires professional accountants and also trained its old staff to become highly specialized and adaptive to change. This firm notices the downward trend in their profits due to standard costing which uniformly examine each item not matter how those items have been manufactured. Hence the qualified professional accountants felt the need for change and shifts their process costing to activity based costing and management.

Gupta and Baxendale (2008) found out that the need of the firm to increase its profitability and market share in the industry is highly effected by the decision of the firms to adopt technological advancement. Overhead cost, diverse portfolio and product volume as well as the complexity of the production operation will be well management with the innovative MATs. Author says that the company with more professional staff can become more active in the market competition. This is because the specialized personnel will be more prone to accept and

handle challenges rather than the people who do not possess the expertise to establish unique framework.

2. EXTERNAL FACTORS

Advocates express their arguments by admitting the fact that market competition and globalization brings tremendous changes in the adoption management accounting practices. However the researchers are not well aware about that particular environmental factor that effects the firms choice of choosing management accounting techniques in the industrialized sector of Pakistan.

2.1 Globalization or International competitive

Akbar Allahyari (2011) has explained globalization as factor which affects many companies in their operations. The author has added economic factors and industry position in it. The barriers to entry in the market has reduced as well as the countries become boundary less which means more market competition which is resulting from the extent of globalization.

2.2 Market Competition

Akbar Allahyari (2011) also given their opinion on the level of market competition and company market share will directly affect the choice of the company to eliminate or select costing methods. Lino et al. (2005) have also talk about the consumer and sellers effects on the management choices for company.

3. PROCESSING METHODOLOGY

3.1 Inventory Management

Akbar Allahyari (2011) expressed the importance of inventory management and control in the manufacturing firms with the help of technological changes and design of production process according to the organizational structure and characteristics of the organization. The author has further explained the importance of computerized inventory management (IM) system which will ultimately increase the effectiveness and efficiency of the management operations in the organization. Hence the author suggested (IM) as a phenomenal factor whose management will increase profitability and reduce cost.

3.2 New management process (TQM, JIT, ABC)

Fowzia and Nasrin (2011) mentioned the rapidness in the development of industry in terms of product diversification and consumer choices. The swiftness of market cannot be freeze by any force but the company can manage itself by adopting modern style of performing task and production activities.

Similar to this Fowzia and Nasrin in 2011 further explained that the organization adopts advance level of accounting tools to work more efficiently in the market. Dick-Forde et al. (2007) enlightened the advancement in MATs and further explained the fact that companies which have changed their organizational structure and organizational size in order to remain competitive must adopt advance management accounting techniques AMATs.

There is a general perception that MATs provides pertinent information for making conclusion, both internally and externally and on a long term or short term basis. There are many different tools for making short term decisions such as cost volume profit (CVP) analysis, and customer profitability analysis

The application of CVP principle is relatively straight forward with the unit selling price being subtracted from the variable cost per unit to arrive at the contribution margin. The total fixed cost is then divided by the contribution margin in order to arrive at the number of breakeven units required. Therefore, this allows managers to see the behavior of the cost prior to making a solid commitment or final decision on a specific order. CVP analysis may also be used by managers when considering if a product should be bought or made. In the previous researches it had also been stressed that cost volume profit analysis appears to be a practice that is strongly used by manufacturing companies in the food business. Management accounting can also produce useful information to make financial management decisions such as payback periods, accounting rate of return and discounted cash flow methods. Most companies used the popular way of measuring return on investment by using the accounting rate of return to calculate the cash flows on major capital projects.

Chapter # 3

Research Techniques

3.1 Nature of Research

The research approach is deductive approach is based on variables and collected data with the help of questionnaires. Hypotheses is made to collect data to find out the impact of, factors effecting the management accounting techniques in the manufacturing sector (FMCG) Food companies in Pakistan. After data analysis the hypotheses are accepted or rejected.

For this particular study I have opted explanatory research, cause and effect relationship was found out between the variable or factors that on which the decision of the company depends for the selection of management accounting techniques. Dependent variable is management accounting techniques and independent variables are size of organization, Organizational Structure, Professional Accountants (In the sense of Knowledge management), Compatibility of Overhead cost with the cost structure, Customer Power, Globalization or International competitive, Inventory Management and Complexity of production process ..

For this particular research, I used cross sectional study. Data was collected from the legislature of finance Department of all companies included in the sample size who are capable of providing financial information relevant to my topic. The data that I have collected is quantitative in nature. The research type is explanatory.

3.2 Sample Size

This research will cover the 40 listed manufacturing companies of Pakistan. All the companies are listed at the exchange of Pakistan, and we will be studied for this research.

3.3 Sampling Method

The Sampling technique used in this research paper is **Random and convenience** sampling technique. This is mainly because our sample size is based on the (FMCGs) Food Manufacturing companies which are being randomly selected from listed companies on Karachi Stock Exchange. This sample includes confectionaries, food and beverages companies which have highly contributed to my research.

3.4 Data Collection

The data will be collected from questionnaires sent to the companies by using primary data technique. Also expert's opinion will be taken from the concern manufacturing companies.

3.4.1 Data Type

The data collected in this research paper is a combination of primary and secondary type as the primary data is being arranged with the questionnaires as discussed above. However secondary literature has been obtained with the help of previously published Journals and articles on the Web.

3.5 DEPENDENT VARIABLES

3.5.1 Management accounting techniques

Management accounting techniques make the management of the company to act according to the dynamic environment of the market and inside the organization. These

techniques include the tools to make working activities easy and create swiftness in the organizational work.

3.6 Independent variables

These are the factors which are independently changing the decision of the firm in many ways.

3.6.1 Size of the organization

The size of the firm has been measured with the annual sales turnover and the total number of workers employed in that organization. On the basis of average results from these parameters we will justify our hypothesis which is simply the impact of our independent variable on our dependent variable.

H₀1: There is no significant impact of size of the organization on Activity based costing.

H₁1: There is any significant impact of size of the organization on Activity based costing.

3.6.2 Structure of the organization

The second variable used in this research is the structure of the company. The impact of this independent variable has been examined with the help of classification of organizations on the basis of its centralized or decentralized, functional and matrix structure. The structure of the organization has also been checked by the placement of employees in unitary level in the organization. This employee placement is a crucial part in the estimation of organizational structure because large companies place employees with their specialized level of skills on each task by functions or specialization.

H₀2: There is no significant impact of Organizational Structure (centralized or decentralized) on successful managerial practices in Pakistani manufacturing FMCG firms.

H₁2: There is a significant impact of Organizational Structure (centralized or decentralized) on successful managerial practices in Pakistani manufacturing FMCG firms.

3.6.3 Professional Accountants

H₀3: There is no significant impact of Professional Accountants (In the sense of Knowledge management) on the choice of firms to change their management accounting practices according to the market competition.

H₁3: There is a significant impact of Professional Accountants (In the sense of Knowledge management) on the choice of firms to change their management accounting practices according to the market competition.

3.6.4 Globalization

H₀4: There is no considerable impact of Globalization or International competitive on the user (firms) which is a resistance factors on successful implementation of management accounting techniques in the manufacturing sector of Pakistan.

H₁4: There is a significant of Globalization or International competitive on the user (firms) which is a resistance factors on successful implementation of management accounting techniques in the manufacturing sector of Pakistan.

3.6.5 Market Competition

H₀5: There is no significant impact of competitiveness of market on the user (firms) which is a resistance factors on successful implementation of management accounting techniques in the manufacturing sector of Pakistan.

H₁5: There is a significant of competitiveness of market on the user (firms) which is a resistance factors on successful implementation of management accounting techniques in the manufacturing sector of Pakistan.

3.6.6 Inventory Management

H₀6: There is a significant impact of Financial Reporting Rules of a manufacturing firm on the successful implementation of management accounting techniques.

H_a6: There is a significant impact of Financial Reporting Rules of a manufacturing firm on the successful implementation of management accounting techniques.

3.6.7 New management process (TQM, JIT, ABC)

The literature has called the sophistication in the traditional techniques as advance level of MATs which are more compatible with the current technological era.

H₀7: There is no significant impact of tools of Inventory Management such as Economic order quantity model and Just-in-time system on the successful implementation of management accounting techniques.

H_a7: There is a significant impact of tools of Inventory Management such as Economic order quantity model and Just-in-time system on the successful implementation of management accounting techniques.

Chapter # Four

Analysis

4.1 Outcome of the Research

The analysis part reveals the reliability and statuses of each variable in relation with the dependent variable. This research paper opt to define the significance of relationship between the six independent variable that are size of the organization, structure of the organization, professional accountants, globalization, market competition, inventory management and advance management accounting techniques with the dependent variable management accounting techniques (MAT).

Table No. 4.1 **Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.836 ^a	.698	.632	.36430

The test from SPSS analysis shows the value of Adjusted R^2 to be .698 of 69.8 % deviation which is the reliability of results. It means that there is almost 5.7 % room for further research in this study.

Table No. 4.2 ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.837	7	1.405	10.589	.000 ^b
	Residual	4.247	32	.133		
	Total	14.084	39			

a. Dependent Variable: MAT

b. Predictors: (Constant), AMATs, company_size, Globalization, Market_Competition, Inventory, Professional_accountants, Organizational_Structur

Table 4.3: Summary of Result

S.NO	Variable	Result = H ₀
1	Company Size	Failed to Reject Alternative Hypothesis
2	Organizational Structure	Failed to Reject Null Hypothesis
3	Professional Accountants	Failed to Reject Alternative Hypothesis
4	Globalization	Failed to Reject Null Hypothesis
5	Market Competition	Failed to Reject Alternative Hypothesis
6	Inventory Management	Failed to Reject Alternative Hypothesis
7	Advance MAT	Failed to Reject Null Hypothesis

Table 4.4: Correlation Coefficients

Model	Un-standardized Coefficients		Standardized Coefficients	T	Sig.
	B	Beta	Beta		
(Constant)	0.274	1.694		-.726	.473
Company size (CS)	.200	.099	.574	2.016	.052
Organizational Structure (OS)	-.254	.234	-.396	-1.087	.285
Professional Accountants (PA)	1.133	.368	.725	3.079	.004
Globalization (G)	.256	.158	.300	1.615	.116
Market Competition (MC)	-.504	.180	-.770	-2.794	.009
Inventory Management (IM)	2.476	.728	.521	3.400	.002
Advance MAT (AMAT)	-.133	.239	-.117	-.556	.582

Analysis of Hypothesis

The correlation will be found to be significant at the level of 1% or 0.01

The correlation will be found to be significant at the level of 5% or 0.05

Dependent variable is Management Accounting Techniques (MATs)

$$(MAT) = 0.274 + 0.200 (CS) - .254 (OS) + 1.133 (PA) + .256 (G) \\ - 504 (MC) + 2.476 (IM) - .133 (AMAT)$$

4.1.1 COMPANY SIZE (HYPOTHESIS ONE)

In this research, the first variable company size is being examined on the basis of annual turnover of sales and the number of employees associated with each company. In order to identify the correlation between *MAT* and Company Size primary data has collected through questionnaires and experts opinion. The results show that a 1 % increase in the size of the company would enhance the effectiveness of management accounting techniques by 0.2 %.

$$(MAT) = 0.274 + 0.200(CS)$$

However, the significance level reveals that company size positively affects the efficiency of MATs.

Table 4.1 shows significance value of 0.000^a that is less than 0.05 or 5% which means that the null hypothesis H₀ is rejected and alternative hypothesis H₁ has been accepted.

H₁: the relationship is significant between the organizational size and MATs

4.1.2 ORGANIZATIONAL STRUCTURE (HYPOTHESIS TWO)

The second variable apparently also plays an important role in the choice of organization in selecting MATs. This variable has been examined on the basis of the hierarchical structure of the firm, that whether the organization is running on the principle of centralization or decentralization. The logic behind this parameter is that if the organization follows rules adopted by centralized system then the effectiveness of these management techniques will suffer. However if each unit of organization posses the authority to select accounting techniques according to the cost structure of their products then the effectiveness of MATs will be progressive.

The result shows inverse relationship between the techniques and the composition of organization. If the company sticks with the single chain of command and follows centralized hierarchal unit system then our hypothesis says for every 1 % increase in the centralized and autocratic activates in the organization the MATs will reduced its efficiency by .201 percent or 20.1 %.

$$(MAT) = 0.274 - .254 (OS)$$

H₁: the relationship is weak and non-significant

4.1.3 PROFESSIONAL ACCOUNTANTS (HYPOTHESIS THREE)

One of the most integral parts in the formation of any organization is the availability of number of professional and specialized staff in their work force. The collection of primary data through questionnaire reveals that food manufacturing companies in Pakistan strive towards success acquiring professionally skilled staff. Responses of manufacturing firms were greatly expressing their positive opinion about the hiring of professional accountants in their organization.

The results found from the responses manufacturing firm were analyzed through SPSS. The analysis shows that for every 1 % increase in the hiring of professional resource in the organization will create a 1.133 % positive impact on the usefulness of MATs. This means that the choice of manufacturing firms will be directly proportional with the choice of the firms to hire management professional.

$$(MAT) = 0.274 + 1.133 (PA)$$

H₁: The relationship is perfectly significant

4.1.4 GLOBALIZATION (HYPOTHESIS FOUR)

The impact of globalization on the choice of the firm is negligible as we can see that for every one percent increase in the global competition the firm will change the choice of firm to move from one accounting technique the other. The .116 percent variation in the decision of the firm is showing highly insignificant figure in the analysis of hypothesis result in fail to accept H₁ and acceptance of H₀.

In case the significance level is low or in other words the output says that globalization does not have a significant impact on the choice of the firm in adopting MATs in their organization.

$$(MAT) = 0.274 + .256 (G)$$

H₁: the relationship is weak and non-significant

4.1.5 MARKET COMPETITION (HYPOTHESIS FIVE)

The understanding of effectiveness of management techniques says that if the firm is using standard cost (one of the costing techniques) and getting successful results than this technique is effective with the current cost structure and product portfolio of the company. However if the company increase its product line and diversify its business operations then the effectiveness of previously practiced techniques will reduce.

$$(MAT) = 0.274-.504(MC)$$

The significance test identifies this inverse relationship in quantified numbers and says; for every 1 % increase in the market competition the efficiency of management accounting techniques will decrease by 0.504 %. The test result is significant with a value of P = 0.009 less than 5 % result in the rejection of H₀ and acceptance of the alternative test H₁. The results are twisting the knowledge of the reader by showing negative impact of market competition on the usefulness of management accounting techniques in the company. Analysis rejects the null hypothesis according to which market competition does not effect MATs but it also accept the

alternative hypothesis with an existences of inverse correlation between the dependent and independent variable.

H₁: There is a significant (negative or inverse) impact of market competition on the choice of the firm in its adoption of MATs.

In other words, the increase in domestic market competition will reduced the effectiveness of accounting techniques due to variation in firm's product portfolio and profitability.

4.1.6 INVENTORY MANAGEMENT (HYPOTHESIS SIX)

The selection of inventory management as an independent variable is to the fact that company selects different MAT for the control of its operations. Literature reveals that companies with continues assembly line production process have a great propensity to order inventory on daily bases by using just in time technique to manage their inventory level according to the production needs. Consequently if the company produced products in batches then it would not require to purchase inventory on daily bases, it only needs to order once the amount of inventory according to the batch production size and for this number of food manufacturing companies in Pakistan use Economic Order Quantity (EOQ).

The hypothesis result shows a positive relation of MATs with the level of inventory management. Outcome says for every 1 % increase in the level of inventory control or management in the organization will increase the effectiveness of management accounting practices by 2.476% within the company.

$$(MAT) = 0.274 + 2.476 (IM)$$

The significance test for IM is 0.006 which is below 5 % concludes the rejection of null hypothesis H_0 (there is no significant impact of IM on MATs) and acceptance of the substitute hypothesis of H_1 (there is a significant impact of IM on MATs)

H_1 : There is a significant impact of inventory management on the choice of the firm to select MAT

4.1.7 ADVANCE MAT (HYPOTHESIS SEVEN)

The selection of advance management accounting techniques as an independent variable is also a very essential part of the research because of the accordance of continuous technological rapidness in the market. The beta results for AMATs are simply showing an inverse relationship between advance management accounting techniques and management accounting techniques. As the firm moves 1 % towards the advancement of technology and adopt more sophisticated MATs then it will reduce the efficiency of prior accounting practices in the organization.

$$(MAT) = 0.274 - .133(AMAT)$$

Result from significance test provide p value of .582 % which is greater than 0.05, hence the analysis for variable AMATs concludes to accept H_0 (there is no significant impact of AMATs on the choice of firm when selecting MATs) and reject the alternative one H_1 (there is a significant impact of AMATs on the choice of firm when selecting MATs). Now we can say that the analysis accept H_1 which is failed to reject.

H_1 : There is a significant impact of AMATs on the choice of firm when selecting MATs

Part Five

Critical Review

The relationship between company size and MATs found to be positive which concludes that if the company will increase its sales then it will going to apply more management techniques to handle its cost structure. This variable has also been examined on the bases of number of employees hired on the company payroll. Khajavi Shokrollah and Nazemi Amin (2006) have identified that the company with large amount of sales and greater number of employees will be more inclined to adopt costing technique to manage its cost and profitability. Joshi P.L. (2001) has also analyze this correlation on 60 companies in India including both large and SME companies and came up with the results that size of the organization is positively affected by MATs.

Hanson Allan (2010) tries to establish direct correlation between Organizational structure and MATs on the basis of centralized and decentralized hierarchal levels. However his research outcomes suggest that the occurrence of changes in the division of the firm will not affect the decision to adopt or let go any management accounting practice. The availability of specialized staff always remains a challenging task for the management of the organization. Bidhan C. M (2007) identifies a positive relationship between the hiring of professional accountant and the effectiveness of management accounting practices in the organization.

The analysis for the inventory management system (IMS) in the sample companies shows significant correlation between (IMS) and MATs. Dalberg (2011) explains the dynamics of the operating system of the company and suggest that if the company manages its inventory by apply

economic order quantity or any other management technique appropriate to its production then this will increase the profitability of the organization. Research outcomes are suggest the existence of a negative correlation between the dependent variable management accounting techniques (MAT) and the independent variable Advance management accounting practices or techniques (AMATs).

Sharkar et. Al. analyzed the relational difference between these two dependent and independent variable in different manufacturing firm of Bangladesh. He came up with the conclusion that the companies tend to use traditional MATs rather than advance management techniques (AMTs). In Bangladesh companies consider MATs most reliable and also believes that their adoption of AMATs in the operation with reduce the efficiency of their operations as the production process is running with the best match of traditional MATs.

Chapter # Six

Conclusion

This research paper has initially presented a general overview of application of management accounting techniques (MATs) in the manufacturing companies in Pakistan. This paper is completely based on the tendency of the company to minimize the effect of independent variables (determinants) which delays the management choice in selecting management accounting tools for its cost reduction and profit maximization. I have selected seven factors which create hindrance, these include company size, its structure, its professional staff, the external market competition and globalization, inventory management and the advanced management accounting techniques. This paper has analyzed the dependence of management accounting techniques in the food manufacturing companies in Pakistan. The analysis results have discovered all the identified independent variables create changes in the choice of MATs selection by the company except organizational structure and globalization. This means that all other factors are correlated with the decision of the firm in the adoption of appropriate management accounting practices.

Recommendations

Four of the seven independent variables found to fail to reject or in other words shows a degree for correlation with the dependent variable.

- The firm must keep in view the increases in the number of employees and the amount of sales while adopting any accounting technique. It will be crucial decision from the management of the organization because if the company applies traditional ways of calculating sales and overhead cost incurred by the indirect labor than it will increase its expenses in an inappropriate way.

- The firm must also place its working resource on the basis of job skills specification so that the professionalism exist on the basis of higher academics and field experience. It does not matter that the hiring process become more complex but the company can acquired the specialized resources through continuous training and development.

- Another most important aspect is to keep an eye on the industry completion, if the organization is increasing its product portfolio then the company needs to update its costing structure with the help of research on the MATs that best suits its operations.

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