

CHAPTER ONE

INTRODUCTION

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“Explanation and prediction are the key goals for any objective inquiry in accounting.”

- Vishnugupta Chanakya Kautilya

(This means that by applying scientific methods, contemporary accountants do not abandon accounting; rather they restore its original status and are prepared to realize its full potential.)

Chapter One: Introduction

1.1. Introduction

Business is a result of sequences of numerous economic events taking place to manage different objects and activities (Mueller, 1991). Quantifying the activities performed and subsequent results of the business a common language being able to express and communicate business transaction marks a distinct vigilance. Accountancy is the language of business that creates figures representing historical, economic business events and also communicates financial statements of business to the decision makers. This meaningful number assignment process, which is called as measurement, is the basic function of accounting. Initially, accounting developed with the intention of keeping records of business transactions. With simultaneous increase in resource utilization, business transactions and business volumes, calculation of result i.e. profits also got assigned to accounting as function. Later, to record and prepare financial statements different ancillary branches got evolved.

Business transactions are the results of exchange of inbuilt values, the recording of which requires recognition of sacrifices as well as benefits. Quantification of sacrifice in the process of recording transactions cost calculation becomes necessary. Moreover, cost again gets necessitated in preparation of financial statements, for calculation of cost of goods sold and valuation of inventory, again cost becomes necessary. This marked the emergence and evolution of a new branch of accounting i.e. Cost Accounting where in the onus as a branch was to make correct valuation of cost of goods sold for calculating profit or loss and valuation of inventories.

Initially market was dominated by producers with meagre availability of products with limited features. Major portion of cost was direct while indirect cost was nominal due to limited features. At that time the cost of calculating and keeping track on indirect cost was very high as compared to indirect cost. That was the reason why traditionally cost accounting was concerned only with ascertainment of cost by identifying three prime cost elements. Further, development in cost accounting was the subsequent outcome of recognition of indirect cost (non-manufacturing or non – production costs) as a distinct element due to mechanization of production process. Cost accounting concepts advanced further with the beginning of the First World War. The ‘cost plus’ concept was introduced during the war time in order to avoid delay in executing urgent supplies (Vadiya and Gill, 2009). Thus, by 1925 sophisticated cost accounting theories and practices were developed (Johnson and Kaplan, 1987).

Non-manufacturing costs increased during Second World War due to emergence of multi-product producing firms propelled by heavy mechanization with large scale production. This mushroomed growth of industries and mass production aggravated competition in the market as well as expanded the markets. The increased competitions and thereby increased complexities in the decision making process increased demand of accuracy in cost ascertainment as well as cost management concepts giving birth to modern managerial control for cost management practices. The scientific management movement in the industry provided major impetus to the further development of cost accounting practices (Chandler, 1977).

In the first half of the 20th century, industrialization increased hopes and expectation of consumers lead to expansion of markets with innovation and modernization of products and production techniques. There was greater emphasis on production with the rapid revolutionized advancement in the technology the focus shifted to production as consumer was almost unaware of cost of production. So, whole amount of cost i.e. Direct and Indirect was charged using Traditional costing system which focused on cost center method based on a two-stage procedure wherein direct costs are traced to products whereas indirect costs (overheads) are allocated to cost centers on suitable basis. In the second stage, the traditional costing system allocates

overhead costs from cost centers to products using volume-based cost drivers lacking in general basis of allocation of indirect cost. It may be charged on the basis of labour hour rate, machine hour rate or number of units produced. Indirect costs so allocated do not truly reflect the resources consumed by the end product and influence the cost of end products resulting in inaccurate cost information misleading decision making process necessitating refinement of costing system.

In *Relevance Lost* (1987), Johnson and Kaplan criticized American cost accounting of the post-World War II period that being problematic. American industry was not competitive and incapable of producing high quality products in the face of lower cost and higher quality products from Asia and Europe resulting in bankruptcy.

Johnson and Kaplan (1987); Chandler (1977) expressed that Traditional Management Accounting Systems which do not reflect current organizational realities due to typical product costing procedures were designed in the late nineteenth and early twentieth century. In that era, the "prime costs" was truly the primary component of production cost while, product line diversity was less common. Thus, the allocation of manufacturing cost depends on the types of resources that the products consume. The greater the consumption of resources by products, the higher is the overhead attached to the products based on one particular activity base. Thus, traditional costing systems mostly utilize direct labour or other volume related allocation bases for cost assignment purposes and therefore these bases rarely reflect the true cause and effect relationship between overhead costs and cost objects. Thus, Cooper and Kaplan (1998), Cokins (1999) argued that such system usually fails to allocate costs and distort product or service costs considerably. In addition, traditional cost systems are more concerned about the organizational charts than the actual process. These systems are therefore structurally oriented and the process view is completely missing.

During the last score of the 20th century, there were considerable changes in the cost structures of companies caused by new conditions of the business environment. Thus, with expansion of market, increase of production, number of products as well as numbers of producers also increased resulting in heavy competition establishing customer as driving force, making cost as important factor as well as point of

attraction for producers to offer product at competitive prices. In those days, ascertainment of cost was not at all challenged or criticized. But, with increase in attention for quality and feature, share of indirect cost increased remarkably. This drew attention of accounting world in treatment of indirect cost in ascertainment of cost. These changes have resulted in higher overhead rates, higher investment in machinery and services thereby reducing direct labour costs and simultaneously increase in overhead costs. On the other hand, companies today have a wide variety and complexity of products and services, an overabundance of data and substantial non product costs that can dramatically affect true product cost (Drury, 2000). The nature of overhead cost has changed from costs which were predominantly influenced by volume-related factors to a composition determined largely by non-volume-related factors (Innes et al., 1994). Thus, simplistic overhead allocations using a declining direct labour base cannot be justified, because computer technology has reduced the costs of developing and operating of cost systems that track many activities (Drury, 2000).

The new global environment has caused the redesigning of the traditional systems in World Class Companies by adopting new ways of measuring performance and continuous improvement in all aspect of a company's business. In global competition the cost system should reveal the profitability of products, the reasonableness of costs and meet customers' expectations.

Cooper and Kaplan of Harvard University posited new insights decimating the lacuna of traditional costing system and described activity based costing as an innovative answer to the problems created by traditional costing system. Instead of using arbitrary percentages to allocate cost, Activity Based Costing seeks to identify cause and effect relationship to objectively assign costs. The CIMA official terminology defines Activity Based Cost as 'An approach to the costing and monitoring of activities which involves tracing resource consumption and costing final outputs. Resources are assigned to activities, and activities to cost objects based on consumption estimates. The latter utilize cost drivers to attach activity costs to outputs.' This definition emphasized links between performance of particular

activities and the demands that these activities make on the resources of the organization.

Activity Based Costing systems involves different methodology in assignment of overheads. Under Activity Based Costing, Cost pools are created for each activity, related with each type of products or services and the cost of such products or services are calculated on the basis of activities consumed. The technique of Activity Based Costing involves identification of production path, identification of activities that go into making a product, selection of suitable drivers, creation of cost pools, calculating the overhead application rate and assignment of these costs based on application rate.

Sakurai (1996) stated that ABC focuses on resource consumption rather than spending on resources. Thus, the activity-based system can measure the costs of using resources, not the cost of supplying resources. So, major conceptual advance is that ABC system should not assign all organizational expenses to cost objects. This leads to accurate product costing and reveals why operational improvements often do not lead to lower spending.

Thus, Activity Based Costing is an effective cost ascertainment as well as cost management tool. It solves the problem of cost allocation or absorption by assigning all costs on the basis of cause and effect relationship between resource cost and cost object applying two stage process.

Moreover, cost and management accounting concepts and techniques are not only used in manufacturing sectors but also in service sectors to provide cost information for decision-making. Nowadays there is increase in importance of service sector as services impact every village, town, city, and state all across country in nearly every sector of the economy. Services are making the world more connected, allowing producers, consumers and everyone in between to communicate and collaborate quickly and easily. The service sector makes a key contribution to Gross Domestic Product (GDP) and employment in most developing countries.

In the era of 21st century were the whole world become Global Village a country's economy at large depends on industries particularly service sectors. As more corporates are venturing into service industries they create even more competition. So they are required to provide a quality customer service at reasonable cost. A number of service firms have gone into bankruptcy as a result of poor control over escalating overhead cost. Thus, the survival of a firm in service industry is largely dependent on the availability of timely and quality information for decision-making and the ability to keep the operation cost at marginal level.

Service firms differ significantly from manufacturing firms in that they are labour intensive rather than capital intensive. Most of the labour cost can be traced directly to the firm's output of services. The rest of the cost is usually charged to a single overhead cost pool and then allocated to specific engagements and distort the total cost. If the accounting system arbitrarily allocates costs to a job rather than allocating costs that reflect the true inputs, the firm is not considered as competitive while bidding jobs and measuring performance incorrectly.

Service organisations usually have single cost driver technique in their cost measurement and allocation procedures. Generally, those service firms which have high overhead costs and are more labour intensive can get more benefits of Activity Based Costing System. Activity Based Costing will help service companies to identify and allocate overhead costs and quantify labour costs associated with each activity. A service firm, however, can collect costs by various functions and allocate them on basis of cost drivers or activities that cause the costs to vary consequently better evaluation of costs of different types of services. If the results are significantly different from the traditional cost allocation approach used evaluation of past performance can become more meaningful.

Even after a number of years, Activity Based Costing system is still in its infancy due to lack of systematic study in the direction of application of Activity Based Costing in service sector. Even though the concept developed in early 1990s as a tool of cost management it is not get practiced in India. This Research endeavour analyses how an Activity Based Costing system works as a tool of cost management and improves

operations to better meet the needs of Service sector customers in a more cost – effective manner.

1.2. Rationale of the Study

The idea of Activity Based Costing drifted in 1980s, since then numbers of efforts are made to refine the same. The entire literature review has profusely advocated the strategic importance of ABC amidst the changing dynamics of factors like global competition, automation revolution, changes in business processes and business environment. Despite of significant growth in economic activities in the non-manufacturing sector literature review revealed that ABC is more rooted in the manufacturing sector. There is increase in the number of studies on application of Activity Based Costing in Service Sector, these studies discuss the advantages of ABC but seldom disclose the details of an ABC calculation and its comparison with the traditional method. This has hampered the reach, understanding and application of ABC concept to organisations at large and leads to unawareness of ABC and its application and the consequent non acceptability and impopularity. Most of the activity based costing researches were carried out using quantitative methods. Quantitative methods (questionnaire survey) were comparatively more in use than the qualitative method (case study). Most of the Activity Based Costing research was done in developed countries and very few in developing countries. In India very few studies were carried out on Activity Based Costing particularly in the service sector. In the service sector particularly in Health care as well as in Banking sector reforms become a key fiscal policy challenge in both advanced and emerging economies.

As there is increase in the demand of subsidized medical services in the country government is spending significant amount of Gross Domestic Product on health care. For this, governments across the globe endeavor to make its population aware and provide accessible, affordable, quality healthcare. One of the primary objectives of Government of India is to improve the health status of population. Most Health Care organisations continue to struggle with identifying the costs of products and services provided by them, capturing the full cost of products and services, including inter-entirety and department costs as part of full costs. The difficulties experienced in allocation and absorption of costs due to the integration of various inter-related

processes and inter-dependence of the processes that are flowing from various service cost centres mutually. The health sector usually finds difficulties to allocate the cost of stand-by facilities. Poor costing system has adverse influence on pricing, quality of service rendered and on its own sustainability. Calculation of reliable and accurate cost and the identification and elimination of non-value added activities are becoming more significant in the health care sector regardless of public or private health care. Therefore, Health Care demands good cost accounting system for detailed cost information that management needs to control current operations and plan for the future.

RBI has initiated several policy measures to strengthen the cooperative banking sector by gradually introducing the prudential norms and regulatory prescriptions at par with commercial banks. Cooperative banks are now functioning in a highly competitive environment. Entry of more players in the banking arena has increased options to customers and banks have both opportunities to grow and challenges for survival. This compels businesses to discover more efficient ways of doing business. Cooperative banks require improving their bottom line through internal accruals without relying on frequent bouts of capital infusion by the government. They should review their pricing policies on deposits and loans, appraisal systems, recovery procedures, major expenditure items and devise suitable action plan to plug leakages and augment income. Cooperative banks require good cost accounting system for detailed cost information that management needs to control current operations and function profitably. Cooperative banks require information to achieve its goals in an optimal manner, to serve the core needs of internal business managers, to improve decision support objectives, internal business processes, resource application, and customer value.

Activity-based costing (ABC), as a management accounting tool can offer a solution for accurate costing and improvement in efficiency, effectiveness, and quality of the cost management in Health Care as well as in banks. Considering the importance of accurate costing of services to reduce costs and favorable potential ABC method, this study estimated the cost of Health Care and Co-operative Bank using ABC method.

This research will act as a link between objectives of keeping cost accounting system and its effective use to provide information for various business applications. The research tries to contribute towards evaluation of cost accounting, objectives of keeping cost accounting system in the organisation and its importance in cost management practices by providing relevant information for decision making. Another contribution is that with this research the conceptual comparison between the traditional costing system and ABC is tested. Further, it compares the application of traditional costing system and ABC and their suitability as a tool of cost management for various business functions. This can be used by other researchers to understand the process of creating Activity Based Costing Model for Service Sector which professionals can use to keep a competitive edge. This study will help practitioners and academia to grasp the importance of ABC in the service sector as a tool of cost management. The novel contribution will be that it attempts to use both quantitative and qualitative methods. Though plenty of research work has been carried out in this direction for its easy implementation as well as practice yet, it still yearns for practical acceptance. Hence, this research has possibilities of contributing towards abridging this divide in service sector concretising the present competitive service based economy.

1.3. Objectives of the Study

The main objective of this research endeavour is to carry out a systematic study of role of Activity Based Costing in cost management as well as business decisions. Further, to check the effective use of Activity Based Costing as a tool of cost management in service sector organisations, by integrating both, qualitative as well as quantitative measures and understanding the same.

Specifically, the study seeks to:

1. Expound the theoretical framework of cost structure as well as different approaches of Costs ascertainment in service sector organisations.
2. Document the cost ascertainment practises of select service sector organisations.

3. Study the objectivity of Cost data and its use in Cost Management practices in Service sector.
4. Examine the objectivities of present traditional volume based indirect costs allocation practices followed by service organisations and expected enhancement with the Activity Based Costing.
5. Gauge the relationship of indirect costs with reference to use of cost data in decision making of select service sector organisation.
6. Ascertain the views of practising accountants, company directors, auditors, members of the professional bodies and managers with regard to the utility of information generated by Activity Based Costing.

Considering the above identified objectives, the research design followed has been essentially descriptive and explorative.

1.4. Research Methodology

This part of the study discusses the research methodology followed and details road map to achieve research objective. This section explains research design, methods of research, research instruments, population, sample size, sampling method, sample unit, data source and data analysis tools. This part of study will reveal all the realities and provide absolute idea for understanding activity based costing as a tool of cost management.

1.4.1. Research Design

A research design is a pillar for carrying out any research. It constitutes the structure for the collection, measurement and analysis of the data collected. For the present research work descriptive research design is used to study the cause and effects through possible relationships among variables under study. Primary data have been collected through structured questionnaires, interviews and secondary data have also been collected from various sources.

1.4.2. Methods of Research

The present research intends to fill the gap between idea and practice of Activity Based Costing in service sector. The main objective of this research endeavour is to carry out a systematic study of role of Activity Based Costing in cost management as

well as business decisions. Further to carry out a systematic study to check the effective use of Activity Based Costing as a tool of cost management in service sector organizations, by integrating both, qualitative as well as quantitative measures and understanding the same.

1.4.2.1. Case Study

Service Sector is under great pressure to lower costs and improve the quality and efficiency of operations due to a competitive Industry. Particularly, Service Organisation requires cost information to improve the quality, timeliness, and efficiency of the activities they perform and to understand the cost of the individual activity. Hence this study focuses on effective use of Activity Based Costing system in selected institutions in Service sector with the help of case study. The case studies have been used to investigate the validity, objectivity and efficiency of activity based costing system as a tool of cost management in the selected service sector organisations.

1.4.2.2. Survey Study

An attempt in this research study has been made to put forward findings and results of the research study aimed at studying the views of practicing accountants, owners, trustees, managers, research scholars, executives, professionals, academicians, students of master degree with the related discipline accounting and cost accounting as well as members of professional bodies on practices, awareness and practicability of objective and effective use of activity based costing system as a tool of cost management. Hence, this part of the study focuses on collecting and analysing opinion received from the randomly selected respondents through a survey method i.e. quantitative method.

1.4.3. Research Instruments

Primary data has been collected using various research Instruments such as, Structured Questionnaire, time sheet and Personal Interviews according to the requirement of data for analysis. Structured questionnaire is used to collect opinion of practicing accountants, owners, trustees, managers, research scholar executives, professionals, academicians, post graduate students with the related discipline of

accounting and cost accounting as well as members of professional bodies. This study uses a Likert scale with equal intervals between response categories, to collect opinion on close ended questions. Personal interviews are conducted for gathering various required information for case study. Timesheets are also used to collect the information about time spent by employee on various jobs performed.

1.4.4. Population

For the Case Study Method all the laboratories and banks in Gujarat are sampling elements for the work. For the Survey Method Practicing accountants, owners, trustees, managers, research scholar executives, professionals, academicians, students of master degree with the related discipline accounting and cost accounting as well as members of professional bodies of Gujarat region are sampling elements for this research.

This research studies the Application of Activity Based Costing in selected Service sector organisations in order to achieve aforesaid objectives. This research work is divided in three parts:

1.4.5. Part One of the study identifies the cost ascertainment practices based on traditional costing system as well as cost management practices in selected Service sector organisations. Further, it examines the various aspects of cost and the effective variables in cost management. This part also deals with study of costing system and examines its impact on decision making.

1.4.6. Part Two of this research endeavor deals with in-depth case study (Qualitative Approach) analysis of selected Service sector organisation in order to verify the cause and effect relationship of cost ascertain methods and cost management. Noor (2008) opined that the qualitative research method is usually exploratory in nature. It defines the problem or develops an approach to the problem. It is used when an outcome is unpredictable or when one is unsure of what to expect. It is based on the socially constructed facts and people's opinion that cannot be estimated numerically. Moreover, it delves deep into issues of interest and investigates nuances associated with the problem at hand.

Thus, this part of the study incorporates case study to investigate the validity, objectivity and efficiency of activity based costing system as a tool of cost management to ascertain cost and use the information for decision making in the selected service sector organisation.

1.4.6.1. Sampling Design for Case Study

For case study analysis, two organisations are selected from two different important services i.e. Health and Banking. Representative sampling unit was defined as the Government Servants Co-operative Credit Society Ltd., and Health Care organisation i.e. Parakh Laboratory. The non-probability sampling approach was put to use and based on purposive sampling method for drawing of sampling units.

These organisations are selected considering one – Parakh Laboratory, a small size organisation and another big size organisation - the Government Servants Co-operative Credit Society Limited. As they are maintaining accounts and other records systematically on commercial basis, also having cost awareness among management and staff, a professional set up and accessibility to information led to the choice of these organisations for case study.

Though, both the organisations were using traditional method of keeping records, yet, the management showed a keen interest in the concept of ABC, willingness to know the cost of various activities performed, profitability of various services provided to customers and how this information can be used for decision making. Considering the importance of accurate costing for services to reduce costs and to create favorable potential with the help of ABC this study estimates the cost of selected Health Care and Banking organisations.

1.4.6.2. Methodology followed at Parakh Laboratory

The methodology adopted to collect the required information is based on an analytic-descriptive study, through observations and review of financial documents and extracting cost information of Parakh Laboratory. Study of profitability by establishing the cost - price relation of services has been carried out by adopting Time

Driven Activity Based Costing (TD-ABC) technique of the financial information for the year 2015-2016.

The data collection for the study was carried out during June 2015 to April 2016. In order to ensure a high degree of un-biasness and consistency in conducting this study, the researchers used multiple data collection methods. These methods include; preliminary survey, field research, interviews, observations, and documentary analysis. In order to provide more independent views for the study, interviews were conducted with individuals belonging to multiple aspects of the TD-ABC process at the Laboratory (refer Appendix 1).The collected data were analyzed using an explanatory building approach (Yin, 2003).

The researcher conducted a preliminary survey to gain an understanding of the Laboratory and gathered information about the existing cost system. Research was directly conducted at the site i.e. Parakh Laboratory through observations and interviews.Observations regarding types of laboratory tests conducted, activities performed like registration, cash collection, sample collection, sample processing, testing techniques, report preparation, delivery of report were made to collect data and identify cost drivers and cost pools as well as establishing cause and effect relationship among them. Observations were made by visiting the Laboratory regularly. Data was collected from the interviews with responsible personnel at the laboratory. These interviews were very useful for the researcher to gain an understanding about the laboratory, cost heads, activities and the application of existing cost system. Relevant data collected, compiled and documented by taking into account internal laboratory documents like entry register, case register, test register, cashbook and financial statements to understand the different Activity Based Costing application related aspects and its use in cost ascertainment.

1.4.6.3. Methodology followed at The Government Servants Co-operative Credit Society Ltd., Vadodara

The methodology adopted in this study conducted at The Government Servants Co-operative Credit Society Ltd., Vadodara is an analytic-descriptive approach where observation and review of financial documents were the key techniques. Study of the

cost price of services has been carried out considering ABC technique by procuring the financial information for the year 2014-2015.

The data collection of the study was carried out during February to September of 2015. Ensuring a high un-biased and consistent conduct of this study, multiple data collection methods like interviews, observations, and documentary analysis were used. In order to provide independent views for the study, bank professionals were interviewed for the existing practices of cost ascertainment and calculation and also for developing the Activity Based Costing System (Refer Appendix 2). The collected data was further analyzed to construct ABC Model.

The ABC model is composed of both the cost assignment view and the process view with activities as the intersection of these two views. The cost assignment view provides information about resources, activities, and cost objects. The process view provides financial and non-financial information about cost drivers and performance measures for activities performed.

1.4.7. Part Three of the study deals with Quantitative analysis.

It is very important to understand the practicability of Activity Based Costing, its impact on cost ascertainment and usefulness of ABC in Service Sector as far as Cost Management is concerned. Therefore, this part of the study focuses on collecting and analysing opinion of practicing accountants, owners, trustees, managers, research scholar executives, professionals, academicians, post graduate students with the related discipline of accounting and cost accounting as well as members of professional bodies on practices, awareness and practicability of objective and effective use of activity based costing system as a tool of cost management.

1.4.7.1. Sampling Decisions for Quantitative Study

Representative sampling unit was defined as Practicing accountants, owners, trustees, managers, research scholar executives, professionals, academicians, students of master degree with the related discipline accounting and cost accounting as well as members of professional bodies. The non-probability sampling approach was put to use based on purposive sampling method supported with Personal interviews for

drawing of sampling units. Directory of Western region professionals like CA, CMA, CS etc., and as well representative from various industries and academicians of different city of Gujarat are included in the research.

1.4.7.2. Tools used for Survey Method

For this purpose a Structured Instrument developed to Study Operationalisation of Activity Based Costing system as an effective tool for cost management in service sector is administrated. The questionnaire was canvassed to 200 people willingly consented to participate in the research fetching responses from 129 respondents. The survey analyzed the behaviour of all the important variables on activity based costing as an effective tool for cost management in service sector organisation.

Multi-item measures were used in the questionnaire to provide stronger construct validity as single item measure may not address all of the aspects of the multidimensional constructs. It is believed that more questions under the same construct would enable examination of the construct from different angles (Foster & Swenson, 1997). This study uses a Likert scale with equal intervals between response categories, like opinionnaire in humanities comprising close ended questions.

Respondents were requested to indicate their degree of agreement and disagreement with a series of questions and they were asked to give rank or preferences in the nature of:

Table: 1.1
Likert Scale used

1	2	3	4	5
Strongly disagree	Disagree	Indifferent	Agree	Strongly agree

For some of the questions the preferences were asked by:

Table: 1.2
Likert Scale used

1	2	3	4	5
Poor	Fair	Average	Good	Excellent

The questionnaire in this study contained 15 questions, classified under two parts: Part – I was based on evaluation of the awareness and practicability of objective and effectiveness of cost accounting system, traditional costing system and activity based costing system imbibing evaluation of all important variables on activity based costing as an effective tool for cost management in service sector organisation. Part – II elicits the Personal Profile (demographic details) of the respondents.

The respondents were approached in person to circulate questionnaires. In some cases questionnaires were also sent to the respondents by post and also by E-mail. In response a hundred and forty five questionnaires were received back from the respondents, out of which hundred and twenty nine were considered for further analysis. The answers given by the respondents for each question as well as sub question were quantified in categories and then computed in tabular form to illustrate the responses.

1.4.7.3. Reliability of the Structured Questionnaire

The reliability tests Cronbach alpha coefficient was run to determine how strongly the attributes/ opinion were related to each other and to the composite score. All dimensions of the questionnaire related with measuring opinion were tested and the Cronbach's alpha ranged from 0.771 to 0.960 which really shows internal reliability of the scale. The reliability of a scale as measured by coefficient alpha reflects the degree of cohesiveness among the scale items (Naresh K. Malhotra, 2007 and Jum C. Nunnally, 1981). Testing the scale for reliability revealed that for all the above statements Cronbach alpha coefficient is of 0.914. Therefore, this scale is considered reliable and it is capable enough for further data processing.

1.4.7.4. Validity of the Structured Questionnaire

Convergent Validity has been measured by comparing mean scores of scale with other measures of the same construct. It becomes clear from analysis that the means of same construct were measured and less variation was observed in the given question categories and average score was found to be as similar. Majority of the Respondent's were found as placed between 'Strongly Disagree' to 'Strongly Agree Category'.

1.4.8. Data source

In order to fulfill the objectives of the study, the research study used both secondary and primary data.

Secondary Data: The required data and other relevant information collected from published and unpublished reports, Business Newspapers; Magazines; Research Journals; Research Reports; Financial Statements of the selected service organisation; Government Publications and also e-data was a part of procuring secondary data.

Primary Data: The Primary data has been collected and further analysed by conducting personal interviews (for case study) as well as administering of Structured Instrument (145 in number).

1.4.9. Data Analysis

Complete questionnaires in all respects were considered for the analysis. The raw data collected was further converted into numerical data and coded in MS Excel for further statistical analysis. Consultation with the expert and available statistical package for social sciences (SPSS version 15) software was primarily used for data analyses.

The statistical analysis of the variables in the study has been performed using Descriptive Statistics, Frequencies and Percentages, Pearson's Chi-square, Wilcoxon Signed Test, Cronbach's Alpha and Factorial Analysis.

1.5. Limitations of the Study

All efforts have been made to ensure that the research is designed and conducted to optimize the achievement of research objective. The research work has limitations of data and authentic documents related to costing system practices as it tries to study applicability of Activity Based Costing and its impact on cost in selected Service sector organisations. However, there are some constrains that do not validate the research but need to be acknowledged. This research was conducted with the following limitations:

- ✓ It was difficult to separate various tests conducted at the laboratory and some tests were administered together.

- ✓ Activity based costing system proposed for bank is with cost object point of view as per the wish of management besides, one can calculate detailed cost per transaction, passbook updating, per loan, per withdrawal etc.
- ✓ Activity based costing model proposed in the case study is based on one year data.
- ✓ The small sample of respondents was a significant limitation.

1.6. Research Outline:

The study spans over FIVE chapters as under:

Chapter One deals with the introductory part of the research work, rationale and objectives of the study; the methodology used for the research and also spells out the plan of the study.

Chapter Two explains the theoretical foundation of Activity Based Costing in decision making process at service sector organisations. This chapter presents an analysis of the findings of a number of studies regarding the cost accounting system and ABC system and its use in service sector.

Chapter Three presents the case studies with a view to expound the theoretical understanding of different costs, cost structure and document the cost system practices of selected service sector organisations to study the objectivity of Costing and Cost Management practices followed and gauge the relationship of Application of Activity Based Costing with the Cost management of selected institutions in Service sector.

Chapter Four seeks to gain insight from the practicing accountants, owners, trustees, managers, academicians, research scholars in the field of accounting, post graduate students related to discipline as well as members of professional bodies with regard to present cost system and use of Activity Based Costing in Service sector. The purpose of this study is not only to generate statistics but also to contribute towards the cost management practices by using Activity Based Costing in Service sector. This part of the study focuses on collecting and analyzing opinion received from the respondents through a survey method.

Chapter Five summarizes the findings of this research study and suggests certain policy recommendations. At the end of the chapter, further areas of research on Activity Based Costing have also been highlighted.

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