TITLE PAGE

THE CHALLENGES OF COST BENEFIT ANALYSIS, IN A COMPUTERIZED ACCOUNTING SYSTEM

(A CASE STUDYOF COCA-COLA BOTTLING COMPANY,

ENUGU)

BY

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APPOVAL PAGE

This project titled "The challenges of cost benefit analysis, in a computerized Accounting System" has been assessed and approved by Accountancy Department Committee, Faculty of Management and Social Sciences.

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External Examiner Date

CERTIFICATION PAGE

This is to certify that this research work titled "The challenges of cost Benefit Analysis Computerized Accounting System" was carried out by Igbaji Cecilia, O. with Reg. No ACC/2009/524 in the Department of Accountancy Caritas University, Amorji-Nike, Emene, Enugu.

ACKNOWLEDGEMENT

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Finally, I am indebted to all others who contributed in one way or the other in making my work successful. I deeply regret that due to lack of space on this page, their individual names are not written. May the good Lord reward you with his choicest blessings.

DEDICATION

This work is specially dedicated to my Almighty God for his love, protection and care and to Dad Mr. Okpen James Igbaji for his love and encouragement.

ABSTRACT

This research is on the challenges of cost benefit analysis in a computerized Accounting System. The purpose of this study is to enquire into the viability or other wise of computerized accounting Systems, with particularly reference to coca-cola Bottling Company, Enugu. The objective of the study is to ascertain if the introduction computer system may lead to industrial unrests as workers resists change. Also, the method used in this study is chi-square while the findings in the process of this research work is the implementation of computerization of coca-cola bottling Plc Enugu and also the recommendation for the work is that the company should motivate its personnel more on the use of computers.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Computer has been defined as electronic machine that accept data (input) processes it to produce useful result (output). It is also capable of storing information. It uses predefined instruction known as computer programs to execute the task in order to produce output. Computers technology has helped in no small measure in activating the problems encountered using the manual tools and machines. Computerization ranks prominently in the commanding heights of economic activities of the business world. Through computerization, industries have been able to control their cost of production heading to high profit margin, sustainable growth and development, accurate and lasting records.

The manufacturing industry has come a long way from the manual era of machine operation to modern day science and technology. Within this period, a number of major changes took place in the

business world with significant positive impact on the business world. Notable among these changes are those changes in manipulation of accounting records, fantastic computer designs etc.

We have various types and categories of computers which perform diverse functions; however, the one of interest and relevance to this research is the digital type of computer.

The history of the digital computer data back to the Abacus which was intended in China more than a thousand years ago and used to add, subtract, multiply and divided . This was followed by the counting invented by John Napier in the 1600's. Blaise Pascal followed closely with a mechanical machine that could do similar jobs more efficiently. GOH friend Von Liebritz invented a more improved version of Pascal's machine. Other great mathematicians and investors like Jacuard, Babbage, Grace Hopper etc made greater strides towards, building calculating machines. An American Herman Hoterrith, developed the mechanical members calculator which was used to read punched cards and greatly facilitated the sun of 1890 in that country. Hoterrith founded a company to sell his inventions and

today that company has grown to become IBM which is (international Business machines) the largest computer company in the world.

The era of modern computers began sometime in the period preceding the end of the Second World War when the vast calculations required in the production of the first bomb necessitated he buildings of a giant computer which operated on vacuum tubes. This computer was huge and expensive and only affordable by few.

Thus, from this period on wards, with the introduction of new technologies, computer became smaller in size and cheap as well: such that today we have the micro computer which costs a few thousand naira and can do job undreamed of forty years back.

There are three classes of computers now in use viz;

1. The micro – computers
2. The mini- computers
3. The mainframe computers

i. **MICRO – COMPUTERS:** These computers are designed to handle simple data processing functions; it is the smallest general

purpose computer. Micro computers are capable of handling independent task and do not led themselves to integrated network. Some just j contain a keyboard for input entire, where data is keyed in by an operator of programmes. Others can contain sophisticated input/output forms. Micro computers and their speed are designed to be stand alone computer, which means that they operate independently, on they can be part of a network or system. Their memory is smellier than that of mainframe or mini computers and their speed of processing data is slower also.

ii. A mini computer – is a small computer relative to mainframe and maybe be defined as a seated down mainframe, as the processor and peripherals are physically smaller. Although the processor may be physically smaller, it is powerful than the micro computers; several people can make use of the mini computer to do different jobs simultaneously through a linkage channel called the work-stations or terminals. It can be used to in inventory control, customers account records and employees payroll. It can

also be used to prepare final accounts of companies using computerized accounting system.

iii. The mainframe computer is large and powerful. They have higher processing speed and capability than both mini and micro computers. These are used by large organization with immense data processing deeds. Computers can be used in several fields as widely diverse as law, medicine and architecture. However, the principal concern within the scope of this research work is a data processing and analysis for business organization.

In the past thirty year or so, there has been a tremendous advance in technology of automation. The introduction and adaptation of the computer to business has led to revolutionary changes in data processing methods in advanced countries.

These changes are fast spreading to the developing world. In present day Nigeria, there is a noticeable and marked trend towards computerization of computers, often with little or no back-up capability often with little or no hack-up capability as guards' maintenance and utilization.

Companies are begin attracted to this computerization possibly with the belief that it is sound business to sight coupled with the feeling that it is in vogue for a company to say it is fully computerized.

In answering the question why any organization should consider the transition to computerized accounting system Larry J. Campbel (1979) observes that research by behavioral scientists reveal that he fundamental reasons for transferring to some form of mechanization in information systems are the same as any other tact of an enterprise. Companies turn to mechanization because.

1. Company growth exceeds the capability to expand the present processes by any other reasonable scheme.

2. Technology changes, force different and more computer tactics that can best me mechanized.

3. Efforts to cut costs force searches for alternative. Added it all these is the requirement of data for decision making at a faster speed to meet up with competition.

1.2 STATEMENTS OF THE PROBLEM

The problem of this study includes:

1. The problem of industrial unrest
2. The problem of obsolesce or unsuitableness for the needs of the company.
3. The problems of companies not realize the full potentials of the computer system they have installed thereby leading to inefficiency.
4. The problem of company's data processing operation which are amiable to automation may be over looked.

1.3 STATEMENT OF THE OBJECTIVE

1. To ascertain if the introduction of computer system may lead to industrial unrest as workers resists change.
2. To identify the wrong computer systems either in terms of obsolesce or unsuitableness for the need of the company.

3. To determine how companies can realize the full potentials of the computer systems installed thereby leading to efficiency.

4. To examine how companies data processing operation can be amenable to automation so that they cannot be over looked.

1.4 RESEARCH QUESTIONS

The followings are the research questions

Research questions help in obtaining adequate information within the preview of any chosen topic. Answers to questionnaire will help in the discussion of a research question, some of the research questions which will help to achieve the objective of the study Viz:

1. Is the turnover of workers higher now that you use computer system? Yes/no.

2. Is the high cost of procurement and installation yielding good returns? Yes/No.

3. Are your computers very expensive to maintain? Yes/No

4. If yes, what is the maintenance cost of your computers yearly?

5. Is the usage of computers advantageous to your company? Yes/No.

1.5 RESEARCH HYPOTHESIS

These are problems that put together all the concepts construct, and variables and give the researchers a clear view of the problem under study. That is, they are prepositions put forward by a researcher to enable him or her solve the problem(s) formulated and to achieve the objectives of the research exercise.

The following research, hypothesis are used where

HO: Stands for Null hypothesis

Hi: Alternative hypothesis

1. Ho: Cost benefit analysis, computerized accounting system does not helped coca-kola bottling company Plc Enugu.

Hi: Cost benefit analysis, computerized accounting system helped coco-kola bottling company Plc Enugu.

2. Ho: Here is no programme of computer training skills and acquisition.

Hi: There is programme on computer training skills and acquisition.

3. Ho: Computerized accounting system has no impact on the staff of coca-kola bottling company Enugu.

Hi: Computerized accounting system has impact on the staffs of coca-kola bottling company Enugu.

4. Ho: The staffs of coco-kola bottling company does not benefit from the cost of using computerized accounting system.

Hi: The staffs of coca-kola bottling company benefit from computerized accounting system.

1.6 SCOPE OF THE STUDY

The challenges of cost benefit analysis, in a computerized accounting system. The project is restricted to coca-cola bottling company plc 9th mile, Emene, Enugu State.

1.7 SIGNIFICANCE OF THE STUDY

1. The study will be of immense benefit to the company by improving the use of computer system.
2. The implementation of computerization of coca-cola bottling company Enugu has significantly saved cost and has increased profit maximization.
3. The computerization of coca-cola bottling company Enugu has led to reduction in labour costs.
4. The introduction of computer did both undermine workers morale.

1.8 LIMITATIONS OF THE STUDY

During the course of this study, some constraints were encountered by the researcher which limit the scope of and details of the study. The constraints were numerous as they prove formidable and able to determine to some external the ultimate outcome of the study.

1. Time was one of the constraints, the little time I have as a student had to be apportioned between studies, research and other social endeavors since all the these activities are very important to my well-being none had to be forgone.

2. Financing a research of this nature is not easy, money is needed to sought for material, print questionnaires, and post to respondents and to compile the report. Finance being a scare resource was a very big constraint to the smooth conduct of this study.

3. The uncooperative attitude of some people and due to the duty of secrecy they owe to their company staff makes the not be make available some important fact.

1.9 THE COST BENEFIT ANALYSIS

1. The benefit of an organization using a computerized accounting system is important because the organization will be modernized in its cost of using computer systems for its business.

2. An organization will benefit from the cost of using computers systems whereby the organization will no longer have to spend much money on employees to be employed in the cost of using manual system in the organization because there is no computer system to make their work faster.

3. The cost benefit which an organization will benefit from using a computerized accounting system will include the organization benefiting from the account of the organization not having errors like in the case of using manual system. In using a computerized accounting system, an error cannot occur because the computers will be there to detect error.

4. The organization will also benefit from using a computerized accounting system if in the case of centralize organization whereby their staff can at home it they need anything, from the

office, they can go to the computer and get the information they need from their organization to ease the stress of them going to the office to get information.

5. In the cost of an organization benefiting from using a computerized accounting system, the work of the organization will also be fast and will not be left behind unlike using a manual system that lead to the organization been slow in their activities.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

The review at literature serves to set the theoretical basis for a research work. Related literature will be reviewed under the concept of computerized; accounting system; the analysis of cost benefit of computerization of accounting system.

This chapter reviews literature relating to the theme and sub-theme of this study. Major ideas of this section are grouped and presented under the following:

There seems to be a general consensus amongst most researchers, authors and managers alike that same computerization of business data is crucial. Muscleman Hugihes (1980); are of the opinion that since management dedication are based on up-to-date data, it is essential that a business management information, system be an effective one. And the rapidly increase availability of business information, together with the ever growing complexity and variety of data to be analyzed required some modern scheme for processing business information.

The same information is used in many different departments of a typical business, therefore business data be organized and stored systematically so that it may be retrieved immediately when needed, so the mechanization and automating of records handing is a business "must". It is this implicit faith in computerization that will be tested with a view to answering some of the questions raised in the first chapter.

2.1 EFFECT ON PERSONNEL

According to Ayanyaogu, (1991), there is always the fear that the use of computers by private establishments will cause mass unemployment suffered by the present computer literate personnel. There is a great deal of disagreement about whether computers will create more or fewer jobs. So some school of thought hold that computers will cause many workers in government and private establishments to lose their jobs, while others thinker that presence of computers will cause more jobs to be created and make the existing ones more interesting. As the world gradually moves into

the computer and information age, some jobs which people have will become unnecessary, economically inefficient and result to wastage of resources and will require those who have them to be retained in new skills some of the areas that have already been affected includes, Account clerks, Books, keepers, clerical officers or file clerks. Okoro (sees the effect on personnel against the background of workers natural resistance to change which may result in behaviour which adversely affects efficiency of the computer system, producing accounting information. Such behaviour may be manifested in physical sabotage of the system, avoidance and deliberate attempt to blame the new system for all problems.

Over the years, electronic hard and software have made great impact into the accounting prospection. In particular, the impact of computer on efficiency has been phenomental coupled with the rising volume at business. It is imperative for the accountant to be computer literature. Kodunmi (1990); therefore advocated training programme for accounting personnel to equip them for computerization of industry.

Olukanmi in of the opinion that the introduction certain classes of computer systems also create new jobs. Another author, Terry Carbitt (1991) advises that staff reduction should not be a reason for computerization t least in the short run. He is of the opinion that the staff should be involved in the introduction of micro-computer from the beginning and they should be reassured that the micro-computer is not being introduced to reduce staff but to increase efficiency. Appleby (1981) shared the same view with Terry but went further to stress that workers should be made to be aware that the computer is for greater business efficiency and not an avenue to reduce labour costs.

2.2 THE FEASIBILITY STUDY

Many reasons may lead an organization into considering the use of computer. Whatever the reason, or combination of reasons, the Board of Directors wishes to know whether a computer is appropriate for the business and, it so which procedures are suitable for conversion and what it entails. The object of a preliminary study is

justified. It should indicate the scale of the computer system required which must be in line with the type of business carried out and give some of the magnitude of costs involved.

Accounting to Lostly (1969) the following characteristics are desirable in the man who will carry out the survey:-

Poor record keeping, it is also envisaged, will be a hindrance to obtaining adequate information especially from the company under study.

Reservations on the part of respondents who are to be orally interviewed is equally expected. It is conventional for people in positions of authority not to be forth coming when their views are sought on issues because they feel the issues are sensitive and anything they say may be quoted are thereby endanger their position.

1. A sound knowledge of the business itself. He should certainly have some knowledge of possible areas of application, and a feeling for the long term, future of the organization.

The importance of a sound knowledge of the business cannot be overstated. Computer sellers are after asked to carry out the survey, but these studies are frequently unreliable due to inadequate knowledge of the business.

2. The person should have a reasonable status in the organization. It is a very common tailing to embank upon an ambitious data processing project with a man who is totally inadequate in status and background to carry it through.

3. The person should be widely acceptable in the organization so as to smooth over antagonisms which are certain to arise in the course of a major innovation as the introduction of the computer.

4. Since the company's activities must be considered on a systems basis, the main selected should have some experience of the systems approach, gained either through the organization framework in managing or through operations research.

The next step is to consider his terms of reference which must be agreed in consultation with him. Ideally, they should give sufficient guidance to keep him on the right lines without being so narrow that

they exclude from investigation potentially profitably have some knowledge of computer use in data processing. This may be obtained through undergoing short courses on offer by computer firms.

The entire management should be co-opted into the computerization drive because unless it becomes part of the thinking of management, they will be unable to fully assimilate the scope and limitations for effective utilization.

The next step in the feasibility study is identification of the distinct systems that may be suitable for computerization. For example, a computerized order handling system might include the present functions of sales, accounting, credit control and inventory control. For each system identified a rough idea of the following is required;

1. How many staff are employed?

2. What volumes of data are processed and what are the future projections?

3. How complex is the processing and what are the nature and volume of exceptions?

4. What deficiencies are apparent in the present systems?

More qualitative questions now have to be asked such as:

1) What improvement in customer service possible and desirable e.g. meeting orders more quickly or being out of stock less often?

2) Is better control possible? Speeding up the information feedback loop may make the organization more flexible if management can take advantage of it.

   A reduction inventory may follow tighter control.

3) What expansion of the system is likely, and what are the implications for data processing?

As a result of the survey, recommendation is then made to the board

1. A statement of which area or areas merit further investigation.

2. An overall strategy for the investigation.

3. A detail timetable derived from (2).

4. An estimate of the resources required (men, money material).

5. An indication of the approximate costs of computer which may be involved.

6. Similar approximation of the benefits expect where appropriate.

Mondy, and Flippo (1978); have identified a common mistake among many firms to be that they first purchase a computer and then attempt to design the information system around the computer. The best dealer will look at the need of the business, advice on the software being considered and democratic it on the hardware being contemplated or purchase.

This kind of dealer will provide full after sales service and advise on maintenance contracts. The system should have free maintenance during a warranty period. After this, a maintenance contract should be entered into cost of which will be in the region of 10% of the total system cost per year, Boohe (1976).

The computer can be used in a wide variety of ways and often it is only the potential user who can appreciate and suggest these uses. It is improbable that the user will fully exploit the potential of the computer if he depends on experts to tell how best to use it. These

experts are experts in computing net experts in accounting and finance. Efforts expended in computerizing accounting system will prove to be a worth white the company would be bogged down with unreasonably high overheads. It would have surplus capacity and under utilization of both man and machine (OP, Cit).

Larry J. Campbell observes that with the advent of modern computing devices economic feasibility becomes loss of problem than in the 60s and 70s. Although cost remains an important variable-particularly for the smaller organization, the cost per unit of work drops in a computerized system, as growth occurs. For example, the cost of Payroll check decreases within a computerized information system as personnel increases. Total costs over a five year period, equipment personnel site preparation and training are computed at the average of 2% of gross sales, having shown a decline from about 2.7% in 1st year to 20% in 2nd year to 1.9% in 3rd year to 1.7% in 4th year and 1.6% in the 5th year.

This includes an added loading of 5% envisaged as increase overheads. Losty (OP.Cit) notes t hat only those costs of the present

system which will be displayed by the computer should be included in the justification and great care must be taken to ensure that displaced costs are realistic and can be achieved.

A person cannot tell where they want to go until they know where they have been. Therefore, the present system must be studied before any computerized information system is introduced. Possible questions to ask are:

1. What is the present information flow?

2. How valuable is the information in terms of decision making says Luce (1987).

3. How is the information used?

The line and size of business a firm engages in determines the types of software packages to capital budgeting, inventory, gearing and dividend policy will help in management decision. These could be liked to a standard costing system, direct costing system, direct costing system or some other decision orientated accounting system.

2.3 SYSTEM COST VERUS SIZE OF ORGANIZATION:

It is quite obvious that for a small organization with an invariably low volume of data to be processed, an automated system is not needed. The economics of scale will not be in favor of that company with the result that why is it then, that the simple computerized accounting system costs ten times the original estimates and still doesn't work properly after several years? Why are companies spending a fortune to get better management information but failing to use it effectively in decision making? Why are administrative costs rising instead of falling? Why are most installations (of computer) a dead loss when it comes to making a return on investment? Asked Fay, (1972) she goes to identify over-optimism, Ostrichism and Isolation as the can active factors.

A typical cost justification, according to Losty (OP. Cit) might take the general form indicated in table I: each heading would be supported by a detailed analysis.

Table 1: A framework for costing.

		Year 1	Year 2	Final year
1	System cost	Xxx		
2	Running costs	x x x		
3	Conversion costs	x x x		
4	Total costs			
5	Displaceable costs			
6	Displacement attained			
7	Other benefits			
8	Total savings			
9	Balance			
10	Cumulative balance			

1. System costs are frequently under estimated. They include management, system analysis, programming, education and travel. Number of staff and salaries must be projected for each year during the life of the project.

2. Running costs relate to the operating of the system as opposed to its development. Machine and accommodation costs together with salaries for computer management, operations librarians, analysis clerks to handle data re a substantial cost.

3. Conversion costs should be shown separately to focus on a considerable cost which distorts the total by large amounts at irregular interval. It has already been noted that conversion of a file from original documents to magnetic storage may cost several thousand pounds.

4. Total costs is the addition of the first three items. That is, costs, running cost and conversion costs.

5. Displaceable costs are shown supported by breakdown for each activity in the business. The figure is the element of cost to be replaced by the computer, if the activity is expanding, the figure will rise.

6. Displacement attained is that proportion of displaceable costs which will actually be saved, it reflects the phasing taking on

which is complete when displaceable and displacement costs are equal.

7. Other benefits places a value on those items which are hander to evaluate, for example doing something which is impossible without the computer should total cash out flow (4) exceed displacement (6) then a higher cost data processing system is attained. We can only then decide whether other benefit justifies the higher cost data processing system.

8. Total savings are (6) + (7) i.e, displacement cost plus other benefits. Obviously displaceable costs (5) cannot be included so that displaced costs would not appear twice. Balance (9) and cumulative balance (10) are the difference and cumulative difference total cost (4) and total savings (8). If discounted cash flow (DCF) of similar techniques are used, these will be the figures to which discounting is applied.

System costs cannot be fully evaluated without the cost of maintaining a back-up system being included. Owing to the sensitive

nature of information contained in the computer files back-up systems are usually necessary.

Burtles (1990) noted that it is notoriously difficult to gather information about computing disasters, as they are usually not reported, in some cases; they are not even recognized until much later. Many cases are quietly hushed-up for fear of embarrassing the victims and alarming their customers.

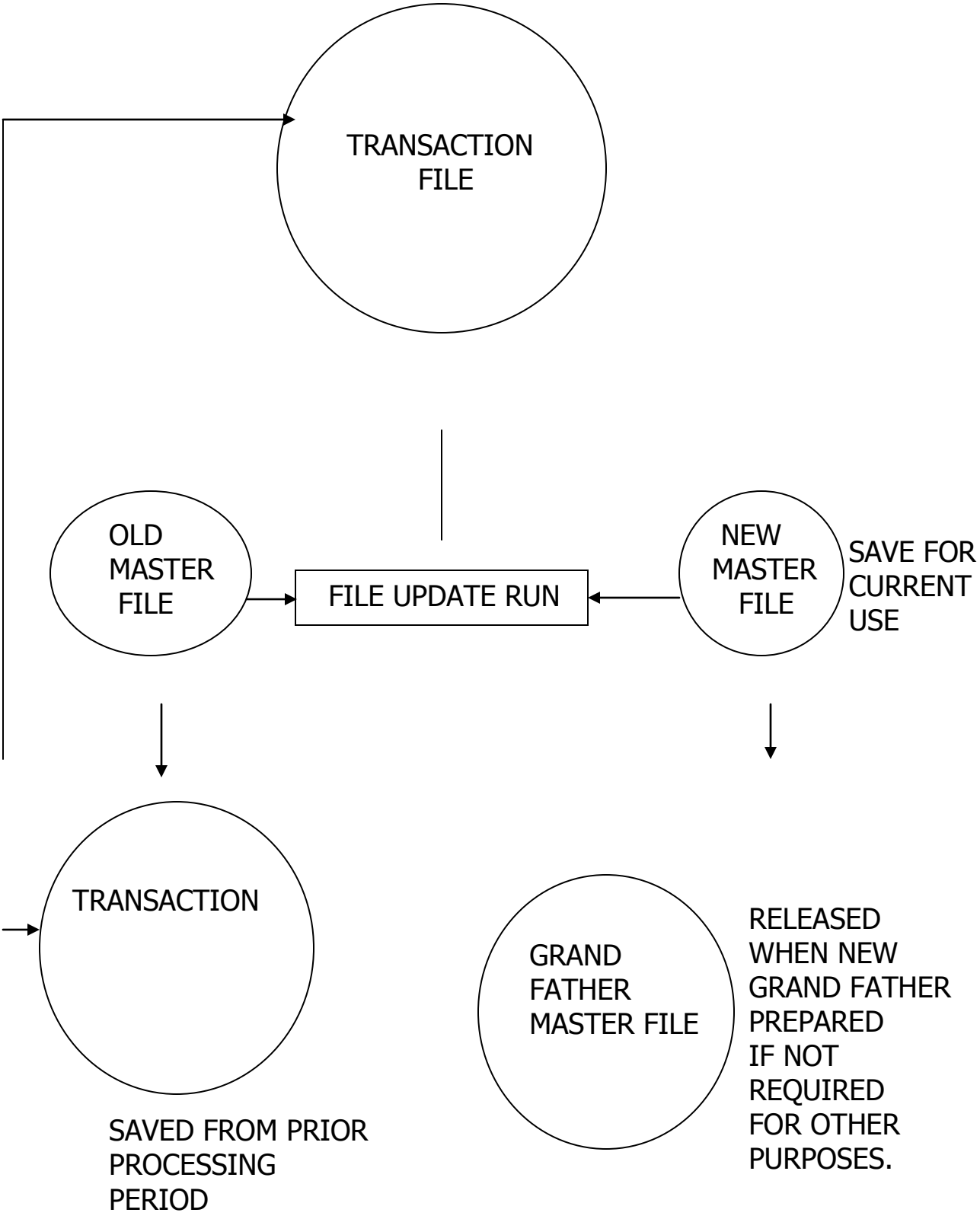
Okpan (1990) in distinguishing between file retention which he notes will provide the first line of defense against relatively minor loss, white security generally conceives of all measures taken to safeguard files against total loss. In essence, the problem is one of how to reconstruct records and files once they have been damaged. One of the most popular methods he notes is the "grand father-father-son" concept. This concept includes the retention of back-up files such that the current master file can be reconstructed. The diagram below illustrates s t he file retention plan. Particularly important files may be retained to the great- grandfather generation it considered necessary.

Disk files are more difficult to reconstruct than tape files because updating old records with new ones is destructive. The old or superseded, data on a record is removed (destroyed) when new data is entered in the same place on a disk.

One expensive means of reconstruction is to have a disk file "dumped into tape periodically (each day or week). This file copy along with the related transaction file also retained can serve as the grandfather to the current disk file (son).

Fig 1:

GRAND FATHER, FATHER AND SON IN MAGNETIC TAPE FILE



2.4 SEEKING EXPERT ADVICE (THE COMPUTER CONSULTANT)

In the high technical exercise of selecting and installing a computer a suitable consultant can fill gaps in the expertise of management, and help them to identify and evaluate course of action including the choice of items of equipment. To use a consultant effectively it is important to match the abilities of the consultant to the job to be done.

Two separate problems thus arise: Identification of the job and evaluating of the consultant, even if the two are highly interrelated management must decide what the main elements in the task are, which they can discharge for themselves, and which should be allocated to a consultant.

In some cases a consultant may be retained to copy out the preliminary study which includes identifying the main elements in the task. No reputable consultant will advise without properly agreed terms of reference, and he should not proceed beyond these without authorization. The allocation of tasks between the consultant and the

organization demands careful thought. Management must weighing the major decisions after carefully weighing the advice of the consultant.

While the organization behind a consult can be important, nevertheless it is the knowledge and abilities of one man that are being paid for. Surely the potential return for the fee involved should be carefully investigated. It is unfortunate that is rarely done. If the man cannot cite past clients who are still satisfied with his works and are willing to verity this, or if he has no suitable previous experience, his advice is unlikely to be work a substantial fee. Understudy most consultants give value for. But there are some charlatans whose existence is only made possible by the I explicable reluctance of managers to investigate the value they will receive for a considerable out lay in fees, observes Losty (Op. Cit).

Today's business leaders do need, access to information technology expertise at board level, and they are increasing unlikely to find it internally.

This has led management to increasingly turn to outside consultants to offer assistance on practically all aspects of information technology, portable micros to large mainframes, strategic studies to data input, expert systems to assembler programming observes white (1990).

Nancy Foy (OP Cit) says that he following questions must be asked:-

1. What is the nature of work done?
2. How competent is the consultant assigned to do the work?
3. How they (the consultants are supervised by their time).
4. How they worked with client staff?
5. How effective were the solutions they proposed or implemented?
6. Whether the assignment was complete within the timed and cost estimated?
7. What are the benefits achieved?
8. Whether the consultants would be tired again?

2.5 DATA PROCESSING FUNCTION WITHIN THE ORGANISATION

When computers first burst upon the business severe in the late 1950's and early 1960's the only practical applications were concerned with the automation of clerical work, accounting, payroll, inventory reporting, and similar financial jobs. Murdick, Rose and Clagged (1984) observed that following the classification of organizational principle of assignment of a service activity by familiarity, the whelming trend at that time was to assign the computer to the controller or the chief accountant, unfortunately, this is where it has remained in many companies. The result has been a disproportionate emphasis on accounting and related clerical work this development was a natural one because the computers gave the accountant an added dimension of importance. However, the result was reluctance on the part of the financial managers to share the machine with others. Many have forgotten the first rule of employees - to exist for the service of the lane operations.

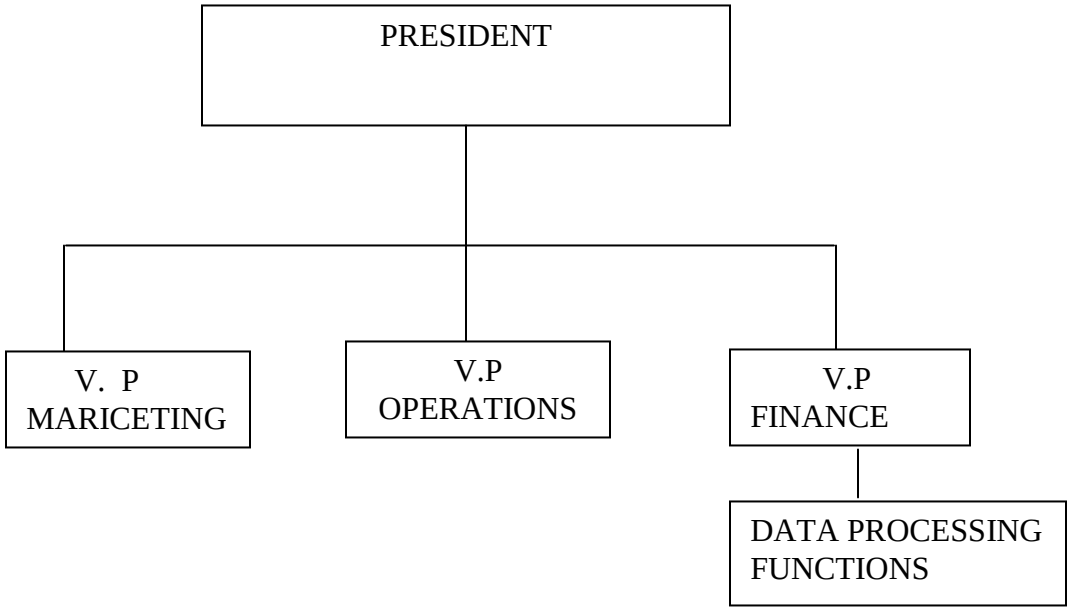
They go further to state that the trend has reversed itself. More and more academicians and practitioners of business realize that the information resource of the company ranks alongside the classical four M's (money, manpower materials, and deserve a vice presidential attention just as the other resources.

The exact location in the organization and the authority granted to the data processing manager is of course, a function of the type of business the firm is into and how important the information resources is to it operation.

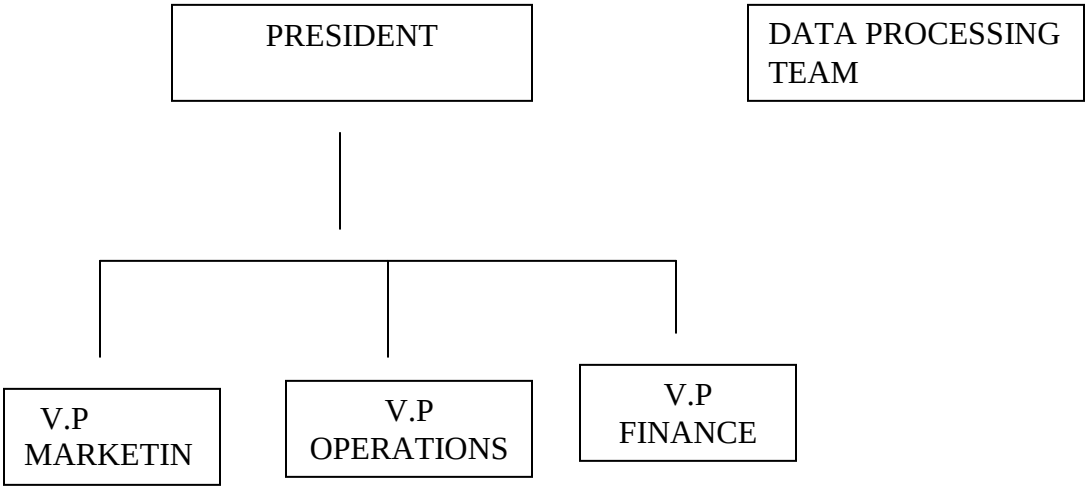
Alternative assignments of the data processing function are shown in figure 2 below.

Figure2: Alternative Assignment of Data processing function.

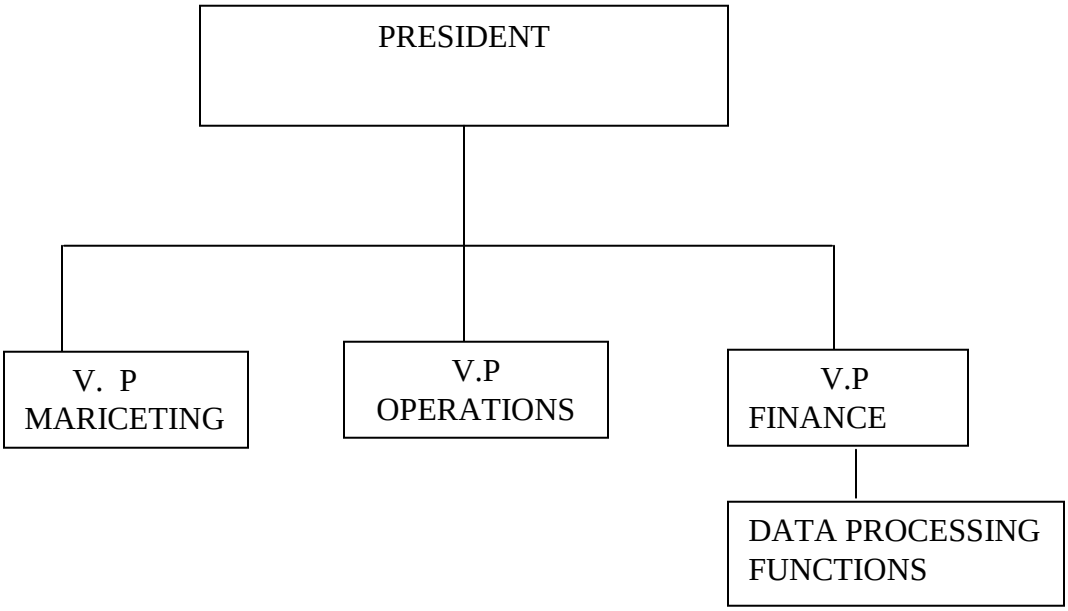
ALTERNATIVE I:



ALTERNATIVE II:



ALTERNATIVE III:



NOTE: ALT 1: Not recommended at anytime

ALT II: Recommended for stages of development

ALT III: Recommended for eventual permanent organization

2.6 CAPITAL BUDGETING TECHNIQUES

Capital budgeting is the whole process of analyzing projects and deciding whether they should be included in the capital budget of a form. Samuels and Wilkes (1975) sees technique of capital budgeting as valuable in computing benefit cost ratio for evaluating investments. Mbachu (1990) identified the process as involving five steps. Viz

1. Management should estimate the expected cash flows from a given project 9asset) including the value of the assets at a specialized end period.

2. The risk involved in realizing the projected cash flows must be estimated.

3. Appropriate discount rate (the cost of capital) at which the cash flow will be discounted must be determined.

4. The expected cash flows are discounted to their present value in order to ascertain the assets present worth.

5. The computed value is compared to the cost of the project. Where the asset's value exceeds its cost, the project should be accepted.

Weston and Brigham (1978) make it clear at most discussions of measuring the cash flows associated with the capital projects are relatively brief, but it is important to emphasize that in the entire capital budgeting procedures probably nothing is of greater importance than a reliable estimate of the cost saving or revenue increases that will be achieved from the prospective outlay of capital funds cost reduction benefits includes changes in quantity and quality of direct labour, in amount of flexibility and efficiency. So many variables are involved that it is obviously impossible to make neat generalization. However, this should not minimize the crucial importance of the required analysis of the benefits derived from

capital expenditure as this capital expenditure must be examined in details for possible additional costs and savings.

They go further to say that the procedures (capital budgeting Techniques) for determining suitability of projects are no better than the data input- the old saying "garbage in garbage" out, "Thus, the data assembling process requires continuous monitoring and evaluation of estimates by those competent to make such.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

Research design is the specification of procedures for collecting and analyzing the data necessary to help solve the problem at hand, such that the difference between the cost and obtaining various levels of accuracy and the expected value of information associated with each level of accuracy is maximized. It is a mode or proof that allows for inferences to be drawn by the researcher concerning casual relation among the variables under investigation. The research instrument used in carrying this study is the questionnaire. Survey design.

3.2 SOURCES OF DATA

To every research work, there is always a reliable source from which data are collected. The two sources of data available to the researcher are listed below and explained.

a. PRIMARY SOURCE OF DATA

Primary source of data is defined as those data containing the full research report including all details necessary to duplicate the study. Primary data are first hand data obtained from the source regarded as original. They are usually collected for specific purpose. This source available the authenticity of information required is obtained. The primary data used in this research was gathered from the questionnaires.

b. SECONDARY SOURCE OF DATA: These are data from sources other than the primary source. It covers published materials and information gathered by other agencies for their own purposes but which incidentally is of use to the researcher. It includes text books, journals and lecture notes etc as it is being used for this work.

3.3 AREA OF STUDY

The study area involves coca-kola bottling company limited, Enugu which is the organization used as my case study.

3.4 POPULATION OF THE STUDY

This is the collection of all staff of a particular organization such as people, living object. It comprises the relevant management staff of coca-kola bottling limited, Enugu. The total population of the study is 100. The population distribution is as follows.

NO OF BRANCHES OF ENUGU	**NO OF POPULATION**	**PERCENTAGE**
Emene Branch Enugu	60	60%
9th Mile Enugu	40	40%
TOTAL	**100**	**100%**

Sources: Field survey 2013

3.5 DETERMINATION OF SAMPLE SIZE

A sample is a subset of the population in research; a sample is drawn through a definite procedure from a specified population. Sampling refers to the process of selecting scientifically valid samples as well as generalizing from such samples to the total population. The sample size is determined by using Yaro Yamere (1962) Formula of finite population

formula $n = \frac{N}{1+N(ei)^2}$

Where n = sample size

N = Population

e = Level of significance or error = 0.05 or 5%

I = Constant

n =100

e = 0.05

$$\frac{100}{1 + 100\ (0.05)^2}$$

$$n = 100$$

$$1 + 100\ (0.0025)$$

$$n = \frac{100}{1.25} = 80$$

$$n = 80$$

sample size were distributed to each branch using Bowley's proportional method of formula

$$\text{Formula} = \frac{Nh \times n}{N}$$

Where h = population of each branch

n = sample size of the study

N = Total population

Therefore, the allocation will be as follows:-

NO OF BRANCHES OF ENUGU	NO OF POPULATION	PERCENTAGE
Okpara Avenue Branch Enugu	60	60% (80)/100 = 48
9th Mile Enugu	40	40% (50%)/100 32 (50%)/100 32
TOTAL	**100**	**80%**

3.6 RELIABILITY TEST: Test re-test method

The research instrument administered to population were reliable because the respondents were constraint, respondents gave almost same answer to many of the research questions.

3.7 VALIDITY TEST

The questionnaire is designed to elicit response on the challenges of cost benefit analysis in a computerization, perceptual evidence. From

Nigeria. The measuring instrument (questionnaire) is valid because my supervisor validated the work and the researcher succeeded in achieving the objective which is to test whether the researcher design is capable of eliciting the required response from the respondents.

3.8 METHOD OF DATA ANALYSIS/TECHNIQUES

The method of data analysis adopted in this study were that of the use of simple tables in the analysis of data collected, while chi-square was used for testing the hypothesis.

Formula for chi-square.

$$X2 = \Sigma \frac{(fo-fe)2}{fe}$$

where x2 = calculated value of chi-square

Σ = summation

Fo = Observed frequency

Fe = Expected Frequency

Df =Degree of significance (c-1) (R-1) or (column-I (Row -1)

3.9 DECISION CRITERION FOR VALIDATION OF DATA

In taking a decision, the null hypothesis is accepted if the critical or table value is greater than the computed value of x2 is greater than the critical value.

That is, if x2 > 2e, reject Ho (Null hypothesis)

if x2 < x 2e, Accept Ho (Alternatively hypothesis)

where x2 = critical value or table value

x2e = calculated value.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 DATA PRESENTATION

In this chapter, all the collected data from the questionnaire are presented , analysis and interpreted.

Table 4.1.1 Questionnaire distribution and collection

Number of questionnaire distributed	80	%
Number of questionnaire returned	50	%
Number of questionnaire not returned	30	%

Source: Field survey 2013

For the analysis, the researcher will be making use of the number of returned questionnaire which is 50.

Table 4.1.2 Use your company established before civil ?

OPTION	**NUMBER OF RESPONDENT**	**PERCENTAGE OF RESPONDENT**
Yes	30	60
No	20	40
TOTAL	**50**	**100%**

Source: Field survey 2013

From the above analysis, it can be seen that 60% representing 30 respondents were yes, while the remaining 40% representing 20 respondents were No. This shows that the company was established before the civil war.

Table 4.1.3 is your company up to 35 years of existence?

OPTION	**NUMBER OF RESPONDENT**	**PERCENTAGE OF RESPONDENT**
Yes	15	30
No	35	70
TOTAL	**50**	**100%**

The above analysis shows that greater percentage of respondents says respondent to the No question at 70% and the yes question respondents were at 30%

Table 4.1.4 Has your company an organizational chart?

OPTION	**NUMBER OF RESPONDENT**	**PERCENTAGE OF RESPONDENT**
Yes	40	80
No	10	20
TOTAL	**50**	**100%**

The above table shows that 80% represents the yes question while 20% represents the No question. It shows that the organization has organizational chart

Table 4.1.5 your staff strength is made up of

OPTION	NUMBER OF RESPONDENT	PERCENTAGE OF RESPONDENT
Senior Staff	25	50
Intermediate	15	30
Junior	10	20
TOTAL	**50**	**100%**

Table 4.1.5 above shows that the percentage of the senior staffs is 505, Intermediate 30% while that of junior staff is 20%. This shows that the population of the senior staff is higher than that of intermediate and junior.

Table 4.1.6. What is the annual operating costs of computer system in bottling company Enugu?

OPTION	NUMBER OF RESPONDENT	PERCENTAGE OF RESPONDENT
Below 15	**-**	**-**
15-25	**8**	**76**
26-35	**12**	**24**
TOTAL	**50**	**100%**

Source: Field survey, 2013

From the above table it is obvious that 76% responded to the operation costs of 15-25 while 24% represent the operation cost of 26-35. This shows that the operation cost of computer system is not than much.

Table 4.1.7 is the turnover of your from 1990-1997 fiscal year up to ten million?

OPTION	NUMBER OF RESPONDENT	PERCENTAGE OF RESPONDENT
Yes	30	60
No	20	40
TOTAL	**50**	**100%**

Source: Field survey, 2013

The table above shows that 60% of the responds strongly say yes while 40% says No. This shows that the company from 1990-97 have made up to ten million.

Table 4.1.8. Do you operate computerized information system?

OPTION	NUMBER OF RESPONDENT	PERCENTAGE OF RESPONDENT
Yes	45	90
No	5	10
TOTAL	**50**	**100%**

Source: Field survey, 2013.

Table 4.1.8 above shows 90% as the number of people who answer yes while 10% answer no. This shows that the company strongly operate computerized information.

Table 4.1.9 : Is your turnover higher now that you use computer than when you use manual system?

OPTION	**NUMBER OF RESPONDENT**	**PERCENTAGE OF RESPONDENT**
Yes	36	72
No	14	28
TOTAL	**50**	**100%**

Source: Field survey, 2013.

The table above clearly show that then number of responds for yes is 72% while that of on is 28%. That is, the turnover the company is now higher now that it is using computer system than when it was using manual system.

Table 4.1.10 Are your computers very expensive to maintain ?

OPTION	NUMBER OF RESPONDENT	PERCENTAGE OF RESPONDENT
Yes	11	22
No	39	78
TOTAL	**50**	**100%**

Source: Field survey, 2013

The table shows 22% as percentage of responds to the question of yes while 78% responds to the question of No. From this table, it shows that the computers are not expensive to maintain in the organization.

Table 4.1.11 : If yes, what is the maintenance cost of your system yearly?

OPTION	NUMBER OF RESPONDENT	PERCENTAGE OF RESPONDENT
50,000	10	20
30,000	10	20
20,000	30	60
TOTAL	**50**	**100%**

Source: Field survey, 2013.

20% of the respond to 50,000, 20% also to the question of 30,000 and 60% responded to that of 20,000, in this table, we see that the company spend not less than 20,000 or not to more than 20,000 a year for the maintenance of the computers.

Table 4.1.12: Is the usage of computers advantageous to your company?

OPTION	NUMBER OF RESPONDENT	PERCENTAGE OF RESPONDENT
Yes	32	64
No	18	36
TOTAL	**50**	**100%**

Source: Field survey; 2013

The table above shows from the responds that the usage of computer system is advantageous to the company, where 64% is for yes while 36% is for No.

Table 4.1.14: If yes, what is a he advantage of using computers in your company?

OPTION	NUMBER OF RESPONDENT	PERCENTAGE OF RESPONDENT
Yes	28	56
No	22	44
TOTAL	**50**	**100%**

Source: Field survey, 2013.

The table above shows that there are many advantages of the company using computer system. From the table we see that 56% of the people answer that there is so many advantages of using computer system in the company while 445 answer No.

TESTING OF HYPOTHESIS

In testing of hypothesis the chi-square (x2) was used

$$X2 = \Sigma \frac{(FO - FE)^2}{Fe}$$

Where: x2 = calculated value of chi-square

Σ = Summation

Fo = observed frequency

Fe – Expected frequency

The result is reported below:

The expected frequency is calculated using; $\Sigma = \frac{\text{Row total + column}}{\text{Grand total}}$

Hypothesis 1

Ho: The application of cost benefit analysis techniques has no advantage on computerized accounting system of coca-kola bottling limited, Enugu.

Hi: The application of cost benefit, analysis have advantage on coca-kola bottling or limited , Enugu.

This hypothesis was verified by analyzing the number II, I the usage of computers advantageous in your company?

Table 4.1.14

OPTION	**NUMBER OF RESPONDENT**	**PERCENTAGE OF RESPONDENT**
Yes	32	64
No	18	36
TOTAL	**50**	**100%**

Source: Field survey, 2013.

Options	Fo	Fe	Fo-fe	(Fo-Fe)2	(Fo-Fe2)/fe
Yes	32	25	7	49	1.9
No	18	25	-7	49	1.9
Total	50	-	-	-	3.8

Fe = 50

2 = 25

Fe calculated = 3.8

When x^2 calculated is > x^2 tabulated reject Ho level of significance = 0.05 or 5%

Df = Degree of freedom = 2 – 1 = 1

X^2 tabulated 3.84

Decision Rule:

When x^2 calculated is greater than x^2 tabulated, accept the null hypothesis, Ho and reject Hi. If x2 calculated is less than x^2 tabulated. Since x^2 calculated 3.8 the null hypothesis, Ho is ejected and the alternative hypothesis Hi is accepted. The implication of this is that the advantage of computers on coca – kola bottling limited is advantageous.

HYPOTHESIS 2

Ho: There is no advantage, advantage of suing computers in the coca-kola bottling limited, Enugu.

Hi; there is the advantage of using computers in coca-kola bottling limited, Enugu.

This hypothesis was verified by analyzing the question 12 in the research questionnaire.

Table 4.1.13 If yes what is the advantages of using computers in your company?

OPTION	NUMBER OF RESPONDENT	PERCENTAGE OF RESPONDENT
Yes	28	56
No	22	44
TOTAL	**50**	**100**

Source: Field survey, 2013

Table 4.1.14

Option	Fo	Fe	Fo-Fe	(Fo-Fe)2	(FO-Fe)2/fe
Yes	28	25	3	9	0.3
No	22	25	-3	9	0.3
TOTAL	**50**	**-**	**-**	**-**	**0.6**

Fe = 50

2 = 25

X^2 calculated 0.6

When x2 calculated is $>x^2$ tabulated, reject Ho which is the null hypothesis

Level of significance = 5% or 0.05

Df = Degree of freedom = 2-1 = 1

X^2 = Tabulated 3.84

Decision Rule:

Since X^2 calculated is 0.6 and is less than x^2 tabulated. We reject the null hypothesis and accept the alternative hypothesis which is Hi. That is, there is the advantage of using computers in coca-cola bottling limited, Enugu.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY OF FINDINGS

The findings of this study have some important education implications.

- Computerization of coca-cola bottling company Enugu has led to reduction in labour costs. This is as a result of both the reduction of number of clerical staff as well as the elimination of overtime costs previously associated with clerical and routine information tasks.

- The use of computer consultancy firm by the company its computerization scheme led to costs savings due to the expert advice systems design on type of hard-ware, soft-ware and peripherals needed as well as maintenance and training.

- The management is therefore satisfied with the result of the computerization drive. There is consensus that both tangible

and intangible benefits of highly significant is equally optimistic that by the time the company is fully computerized, the benefits will be so obvious that they cannot be faulted.

- The introduction of computers did both undermine workers morale.

5.2 CONCLUSION

The main thrust of this study has been to x –ray extent to which a computerized accounting system can be justified by a cost benefit analysis. A attempt was made to quality all the relevant parameters in order to come to an objective concluding. It must not be for gotten that several applications such as in the areas of being budgeting, working capital management, variance analysis as well as business forecasting are yet to be introduce.

These applications when fully implemented will no doubt increase the quantifiable benefits of computerized accounting system.

However, in the final analysis, the researcher from all interviews as well as material gathered has been able to come to the conclusion

that the quantifiable benefits of computerization is subsumed by the intangible benefits is such that to some, increase, efficiency and accuracy of data processing which are unquantifiable , far out weights the costs of acquiring the system.

With such as outlook, therefore, it is hardly surprising that the researcher has been able to conclude that the careful computerization programme of the company has been a systematic approach that involved using of consultants the determination of data processing needs and thus the acquisition of the right type of computer hardware. The acquisition of sufficient knowledge through both outside as well as in house, and the gradual and phased method of implementation which ensures that each application is thoroughly implemented and understood before moving on the other, has to ensure that the benefits of the computerization programme of the company far out weight the costs.

Consequently, and with reference to the objectives of the study as enumerated in chapter 1, it can be concluded that using the study as a feasibility guide – line, computerization of any firm with a

moderate level of data processing requirements is cost beneficial provided, that the steps of adequate planning, reliance on experts advice as well as careful and phased implementation is pursued as well the case in coca-kola bottling company Enugu.

5.3 RECOMMENDATIONS

In the light of the findings the discussion and the relevant conclusions on the research work, the following recommendations are therefore put forward.

- The data processing department should be a full division alongside the finance i.e. clinical, marketing and personnel department is order to enable it relate as equals with these departments and be able to ascertain their various data processing needs without bias to any particular department.
- The company should continue to use the computer consultants since it has been seen that their quality of advice is good and has steered the company in the right

direction in terms of costs savings and better quality information at greater speed and accuracy.

- The company should continue to motivate its personnel form more about the use of computers i.e. they should be enable to undergo courses in computer literacy to enable them to fit into the company. In not shell, the company should have a policy of in service – Training of its staff in computer education.

- It bottling company Enugu computerize more functions, the cost per unit of work done well come down that is if the system will be 100 percent utilized the company should look into the modalities and advantages of computerizing its budgetary control as well a cash and workings capital management systems.

- The need for this is avoidable owing to the apparent lack of adequate knowledge of the pattern of production as it links the control mechanism. In budgeting with management of the working capital available.

This current trend, it has been perceived, has led to a situation where there is hazard management of working capital. At times, owing to poor planning, the company finds itself having to take large overdrafts to meet commitments while at other times their surplus cash for immediate commitments without any plan as to investing such idle cash in short term securities or demand deposits.

With the present trend of high interest rates, the ability of a company to ignore adequate working capital management practices without repercussion can be said to be well-nigh impossible. Bottling company is therefore expected to institute an integrated computer system which will help it to better control its working capital. The proposed system should use information gathered from the various department such as stores, production, personnel, marketing as well as accounting department will in addition furnish such information as to probable sales figures at various times.

The information in its entirely will then be used to procedure cash budgets that will enable coca-cola bottling company Enugu to fore cost its cash requirement accurately, the use of computer will

enhance the accuracy of these forecast because any changes in the aforementioned variables will be reflected fed into the computer programmes model for the forecast immediately as ascertained.

Other areas of computerization as business forecasting and variance analysis should be speedily implemented because these will help to make the utilization of the computer system optimal as well as reducing the cost of the company.

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APPENDIX I

DEPARTMENT OF ACCOUNTANCY
CARITAS UNIVERSITY,
EMENE, ENUGU.
21 JULY, 2013.

Sir/Madam

RESEARCH QUESTIONNAIRE

I am Igbaji Cecilia, O. a student of Caritas University, Enugu. Department of Accountancy. I am carrying out a research on "the challenges of cost benefits analysis, computerized accounting system "a compulsory requirement for the award of B sc. in Accounting.

I therefore solicit for your assistance in making my work a success. Your response will be treated with utmost confidentiality.

Yours Faithfully

Igbaji Cecilia, O.

APPENDIX II

INSTRUCTION: Please tick (√) in only one appropriate choice box:

1. Was your company established before the Nigerian civil war?

   Yes [ ] No [ ]

2. If yes, is your company to 35-years of existence?

   Yes [ ] No [ ]

3. Has your company an organizational chart?

   Yes [ ] No [ ]

4. Your staff strength is made up at?

   a) senior staff 12, 10, 8

   b) Intermediate 25, 15, 10

   c) Junior staff 30, 50, 80

5. What is the Annual operating cost of computer system in bottling company Enugu?

6. Is the turnover of your company from 1990=1997 fiscal year up to term million?

7. Do you operate computerized information system?

   Yes [ ] No [ ]

8. Is your turnover higher now that you use computer than when you use manual accounting system? Yes [ ] No [ ]

9. If yes, do the high cost of computer yield a good return, that justices the high cost of procurement and installation?

   Yes [ ] No [ ]

10. Are all the departments in your company computerized?

    Yes [ ] No [ ]

11. Are you aware of other companies that are computerized?

    Yes [ ] No [ ]

12. If yes, what are the names of the establishments? …….

13. Are you using the most modern computers

Yes [ ] No [ ]

14. If yes, what are the names of your computers? .....

15. Are your computers very expensive to maintain?

Yes [ ] No [ ]

16. If yes, what is the maintenance cost of your computers yearly?

.....

17. Is the life span of your computers up to 10 years? Yes [ ]
No [ ]

18. If no, what do you think is the life span of your computers?

.....

19. Has the introduction of computers led to the retrenchment of workers in your company? Yes [ ] No [ ]

20. Has the introduction of computers led to the increased personnel and attendant cost? Yes [ ] No [ ]

21. Is the usage of computers advantageous to your company?

Yes [ ] No [ ]

22. If yes, what are the advantages of using computers in your company?.....

23. Do you think that your computer capacity is effectively and efficiently utilized? Yes [ ] No [ ]

24. Were computer consulting firms consulted before your company embarked on computerization and is your company satisfied with the level of advice they gave prior to your company being computerized? Yes [ ] No [ ]

25. Has there been cases of fraud in your company as a result of computers being used in your office? Yes [ ] No [ ]

26. Do you notice regular breakdown of your computers?

Yes [ ] No [ ]

27. If yes, is the rectification cost worthwhile? Yes [ ] No [ ]

28. Has the introduction of computers affected labour relationship in your company? Yes [ ] No [ ]

29. Is computerization relevant to your company and to the economic life of the country? Yes [ ] No [ ]

30. Has computerized accounting any adv antage over the manual accounting? Yes [ ] No [ ]