ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
SCHOOL OF INFORMATION STUDIES FOR AFRICA

THE USE OF ICT CONSULTING BY ENTREPRENEURS IN ADDIS ABABA

BY

KIDIST SHAWUL
JUNE 2000

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THE USE OF ICT CONSULTING BY ENTREPRENEURS IN ADDIS ABABA

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN INFORMATION SCIENCE

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Dedication

I dedicate this work to my sister Meskerem Shawul without whom this work wouldn't have been possible.

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THE USE OF IT MANAGEMENT CONSULTING BY ADDIS ABABA ENTREPRENEURS

BY

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Abstract

Information and Communication Technology consulting has become increasingly popular in recent years, and is often quoted as a means of coping with rapid changes in technology and in the business environment around the world. However, in developing countries like Ethiopia it is yet a field that is at its early stage and feared by experts to engage into.

This paper investigated the use of ICT consulting services by Addis Ababa business entrepreneurs, and examined the current state and nature of ICT consultants. For this purpose, the research methodology of survey questionnaire was used to gather information from the business firms and a scheduled interview was conducted with the ICT consultants.

The research findings showed that most of the decision-makers of business firms have limited understanding of the technology and the ways it integrates with business. And in much the same way their use of ICT consultancy is also very limited. As the field of consultancy is not yet well developed in the country, there is awareness problem among the public at large. There is limited understanding on "who can do what" in the ICT field in Addis Ababa. Those that have actually made use of consultancy service have been found to prefer the services of foreign consultants. Services rendered by local consultants were seen as substandard.

On the other hand, the study revealed that Addis Ababa ICT consultants concentrate in their services giving on support/maintenance and neglect other areas such as software development for both local and foreign use, system analysis and development, networking,

On the other hand, the study revealed that Addis Ababa ICT consultants concentrate in their services giving on support/maintenance and neglect other areas such as software development for both local and foreign use, system analysis and development, networking,

automation of business processes, etc. And it was observed at the same time that they do not have standards to follow in their service giving.

Based on the findings conclusions are made and recommendations are forwarded in the last chapter. Some these recommendations are:- the need to improve the capacity of business schools to train not only ICT but also its impact on organizations and business process; the necessity to establish a code of ethics and minimum set of rules for ICT consultancy. Policy makers have a considerable role in promoting business and consultants association, information technology associations that develop their own codes of ethics; the culture of self marketing should be adapted through both job related and civic organizations, by attending conventions, serving on committees and speaking at meetings. All these will increase their visibility and make them well known as experts in their field and attract new clients. Another method is the use of online techniques such as mailing lists and the world wide web to interact on regular basis. Consulting firms should use the World Wide Web and print media as a marketing tool. For example a WWW prototype page is designed to show how information on the expertise of the local consultant and information on ongoing activities being undertaken by various firms in the country can be provided. Finally further research areas related to this study are suggested in the conclusions.

TABLE OF CONTENT

PAGE

CHAPTER THREE: OVERVIEW OF ICT CONSULTING

CHAPTER FOUR: ADDIS ABABA BUSINESS

CHAPTER FIVE: RESEARCH METHODOLOGY

CHAPTER SIX: SURVEY FINDINGS

CHAPTER SEVEN: SURVEY ANALYSIS AND DISCUSSION

CHAPTER EIGHT: CONCLUSION AND RECOMMENDATIONS

LIST OF TABLES

PAGE

LIST OF FIGURES

PAGE

CHAPTER ONE
INTRODUCTION

I.1 Background of the study

The necessity of using Information and Communication Technologies (ICT) is becoming more and more acute. Earlier, ICT was introduced in business simply to follow up with the technological innovation. But now, it has become part of basic business processes, eventually giving rise to total dependence of enterprise on ICTs.

Parallel to changes in extensive use of ICTs there have been advances of these technologies dramatically widening the frontiers of their application. They have become ubiquitous. These advances will undoubtedly have impact on developing countries including Ethiopia. Organizations will continue to absorb new technology, new ideas and new facilities. They will continue to exploit ICTs to run enterprises more effectively and more efficiently. It is now almost impossible for businesses to compete in the world market without an intensive use of ICT.

The power of ICT enables organizations not just to replace individual systems, but also to alter the basic business operations. Many organizations are considering

complete business process re-engineering. This, is changing both the shape and the operating style of organizations (Holtz, 1993).

Business organizations are now realizing that they cannot absorb and benefit the overwhelming advances of ICT without the help of experts in the field, i.e. the ICT consultants. These experts play a supporting role in spreading the use of ICT. They provide expertise that the organization could not attract or justify on its own payroll. ICT related services that consultants provide cover a wide range of areas such as:-

- Reviewing and developing ICT strategy;
- Educating general management in a better understanding of ICT, and educating ICT professionals in a better understanding of the business;
- Providing continuous research and developments on ICT and their implications;
- Evaluating the ways in which ICT systems and facilities can be provided to the business;
- Reviewing ICT performance;
- Providing specialist guidance on areas such as data structures, technical architectures, system development techniques, telecommunications or office systems;
- Recommending or providing second opinions on the choice of hardware or software;
- Reviewing projects, either at the outset or when they seem to be in trouble ;

- Managing projects;
- And Providing system development resources ranging from supplying individual contractors to the complete provision of an outsource development facility (Kubr, 1996).

The most successful ICT consulting practice has been the development of an implementation capability in organizations. Consultants have recently moved into outsourcing or facilities management. Outsourcing has become attractive to reduce fixed overheads and to enable organizations to focus on core business (Barcus, 1995).

The present study is intended to investigate such growing ICT consultancy practice with particular reference to enterprises in Addis Ababa.

I.2 Statement of the problem

Very few research has been done with regard to ICT in developing countries. The bulk of the literature refers to developed countries. However, the problem is equally important in the developing countries since ICT equipment is being introduced in virtually all sectors of the economy at an unimaginable fast rate.

Though, over the last decade, many businesses in Ethiopia have acquired ICT equipment, most of them have difficulties to use even the simplest features of the equipment. Many consider these advanced tools as commodity rather than using them for analytical purposes. It is generally reported that in most cases one can encounter ICT being misused or even not used.

The study investigates the application of ICT in businesses of Addis Ababa, and the use of ICT consultants for solving ICT related problems. It also looks at the current state of ICT consulting process in Addis Ababa.

I.3 Objective of the study

General Objective

The main objective of the study is to investigate the use and non-use of ICT consulting by Addis Ababa business entrepreneurs. The research looks at the current state of the existing consultancy services by investigating issues arising from both the consultant and the business firms.

Specific Objectives

The specific objectives of the study are:-

- To find out how ICT is used by businesses in Addis Ababa;

- To find out the current state and nature of ICT consulting firms in Addis Ababa;
- To see whether Addis Ababa business firms use ICT consultants;
- To identify factors leading to use and non-use of ICT consulting by Addis Ababa businesses;
- To find out the satisfaction level of Addis Ababa businesses with ICT consulting services and reasons for satisfaction/not satisfaction;
- To identify the problems faced by ICT consultant in providing consulting services;
- And finally to recommend solutions that will alleviate the problems identified.

I.4 Scope and limitation of the study

- The research tried to look at the trend of ICT consulting in Addis Ababa by investigating both the client (business firms) and the expert (ICT consultants). The study covered those licensed and registered formal business sectors that are listed on Addis Ababa Business Directory 1998-99. The consultants covered in the study are those that are registered at the Ministry of Finance, Government Procurement Unit.

- The study does not cover the informal sector enterprises because there is no formal registry of them.

- Specific data collection was difficult because respondents were either not willing to respond or not available at the time of request. During the period of data collection the Internal Revenue Office was collecting data for tax estimation, which made the respondents more hostile and unwilling.

I.5 Significance of the study

The study was designed to produce immediate results that could be used by planners, business enterprises and consultants.

Some of the major aims include:-

- to raise awareness on the usefulness of ICT consulting;
- to shed light on ICT adoption problems and suggest areas that need improvements;
- to provide data for comparison of ICT consultant performance;
- to indicate the need for increasing professionalism in ICT consulting and areas to focus in the future.

I.6 Organization of the study

This research is divided into eight chapters. The first chapter, which consists of the introductory part, includes the background of the study, the statement of the problem, the objective, the scope and limitations, the significance and organization of the study. Chapter two examines the role of information and communication technologies (ICTs) in the business world. Chapter three gives an overview of ICT consulting. Chapter four gives a profile of Addis Ababa business. Chapter five explains the research methodology that is used for the data collection. The following chapter presents the findings of the research. Chapter seven analyzes and discusses the findings of the previous chapter. The last chapter makes conclusions and forwards recommendations based on findings and analysis.

CHAPTER TWO

THE ROLE OF ICT IN THE BUSINESS WORLD

II .1 Introduction

Information Technology (IT) has no universally accepted definition. Many professionals have presented their definitions from different perspectives. UNESCO defines it as:

> "...the scientific, technological and engineering disciplines and the management techniques used in information handling and processing; their applications and computers and their interaction with men and machines and associated social, economic and cultural matters." p13

Sohal (1998) who sees IT from the business perspective defines it as:

> "...the application of technology to business processes, gathering data and creating information that is valuable to managers who make business decisions". p2

Many writers are in agreement with the general definition that regard IT as a:

> "....technology dedicated to information storage, processing and communication focusing on hardware, software, telecommunication and office equipment that transform raw data to useful information, adding new value in the process." Sohal (1998) p2

Many feel that IT encompasses hardware, software and telecommunications including voice, facsimile and e-mail, as well as the personnel and resources

dedicated to supporting it. The technologies that are used for communication purpose such as telephone, television, radio, newspapers are also often regarded as IT. Traditionally formal and informal communications relied on periodicals, various types of face-to-face encounters such as meetings, conferences, seminars, workshops and classroom lectures. But now these are being supplemented and in some cases replaced by electronic mail, electronic bulletin boards and electronic teleconferencing (Encarta, 1994).

Through time people argued that information technology (IT) and communication technology (CT) are not two independent different technologies but technologies that go along, one complementing the other. It is now generally accepted that the term Information and Communication Technologies (ICT) represents both (Ducombe, 1999).

As they evolve, ICTs are making significant impacts on almost all spheres of life be it social, economic or political. They influence how we know and understand the world. They change work methods and the ways in which we communicate. They affect how we access and share information, and have also become an important source of power. They are playing a crucial role in most societies' capacities to produce, access, adapt and apply information, and thus offer enormous opportunities for facilitating the transfer and acquisition of knowledge. But, what are their actual

roles in the business world?, what changes have they brought in? and what are their implications and prospects?

The following section examines these questions from the perspectives of developed and developing countries.

II.2 Business and ICT

According to Madnick (1993) four business forces are shaping developed countries organizations in the 1990's. Firstly there is the increasing growth in globalization, whereby the scope and presence of organization are expanding beyond their traditional geographic boundaries. Secondly there is fierce worldwide competition that arise from globalization and that has put increased pressure on established organizations. The third is the increasing level of productivity that is introduced to seize the opportunity of globalization and to withstand the impact of worldwide competition. Fourthly there is a volatile environment, that emerged not only from the business forces, but also through various governmental, sociological and legal changes. Information technology plays a significant role in this globalization, competition, production and changing environment.

Although these advances are quite important, an even more significant impact occurs as a result of new ICT architectures: new ways to organize and interconnect components that bring about cost reduction and performance improvements in the business. The development of high-performance, high-reliability, comprehensive communication networks, in organizations, is occurring at a rapid pace. At the same time, both hardware and software technologies are evolving in ways that make it possible to maintain and access extensive amounts of information online. Furthermore, the increased capability of advanced personal computers and workstations, are providing many improvements in the ease of use, enabling people to work with systems with much less formal training, yet be able to accomplish much more complex tasks.

In the 1970's microcomputers, initial forms of ICT, were viewed largely as a technological curiosity, but since then the use of these microcomputers has grown rapidly and become a necessity. In fact, the tremendous growth in computer and related industries use in a relatively short period of time represents the most rapid diffusion of technology in history (Igbaria, 1998). An office in 1970's typically used phone and mail , today a wider range of communication technologies are in daily use, including cellular phone, mail, fax, e-mail, Local Area Networks (LAN) and Wide Area Networks (WAN) and electronic data transfer (Martin, 1998).

ICTs now play very significant strategic roles in different business organizations such as consumer products company; distribution company; pharmaceutical company; transportation industry; software company; insurance company; manufacturing company; financial services; retail; energy industry and airline (Dvorak, 1997). The following are few examples showing its applications in the different business industries.

a. Manufacturing industries:-

Manufacturing industries are among the earliest and most well-established fields of application of ICT. Computers have assumed an increasingly pervasive role in the control of production processes and manufacturing equipment, in other words, in industrial automation.

There are also intangible gains like the improved quality, consistency and reliability of products. Other current application of ICT to manufacturing industry include activities of Computer-Aided Manufacturing (CAM) i.e. the initial design ; final testing and warehousing of products. CAM is a technology that is advantageous in the reduction of production time per part and production costs. The other is Computer Aided Design (CAD) where designers work at computer workstations to draft, visualize and in some cases simulate the eventual performance of new products. CAD has been successfully applied in many fields not just manufacturing

but also in architecture and building design, in the textile and clothing industry. Its use benefits in the improved accuracy and legibility of engineering drawings and the ease of making alterations to designs, resulting in improved designer productivity.

b. Electronic publishing:

Electronic publishing media includes the combination of computer, telecommunications and display technologies. Some of the advantages that this technology provides include: -the production time reduction, changes and new editions conveniently made, the distributed medium such as electronic signal microfilm, disc may be cheaper than a bound volume of print. The range of new technology available to the printing and publishing industries keeps on changing rapidly, however, the cost is high and the implications of change for publishers and printers and the public are great.

c. Finance and commerce:

New introduction of technology such as public banking terminals in retailing and computer terminals at supermarket checkouts, department store counters are common.

ICT is already providing some of the components of an electronic retail information system, for purposes of evaluation. In advertising, retailers and manufacturers can produce their catalogues in the form of a video. Computer and telephone based

information systems are also being used to give specialized services to the financial and commercial world.

d. Communication and transport services:

With the recent communication technology, users of mobile services are able to link to the telephone network via a portable telephone. The availability of telephone in cars is already providing a means of communication for people held up in traffic jams. The other application of ICT is aimed at preventing or at least reducing the occurrence of traffic jams. ICT aided road traffic management controls access to notoriously congested road such as in center of cities (Zorkoczy, 1990).

In general ICT benefits for organizations are extensive. They can take a number of forms: efficiency gains (example: the automation of clerical procedures), increased management effectiveness (example: in decision making) and improved business performance (example: by entering into strategic alliances with other firms.) Some of the other advantages include: -

- New ICT jobs are created opening opportunities for ICT professionals;
- ICT reshapes business environments and changes organizational structure of enterprises, their management systems and the organization and skills of their work forces;

- The emergence and development of ICT enables the business industry to perform value-added activities, to introduce new ways of doings things and to respond and keep up with the ever growing changing market economy;
- Advances in ICT provide opportunities for dramatically increased connectivity, enabling new forms of inter-organizational relationships and enhanced group productivity;
- Vastly improves human interfaces to systems;
- Increases the ability to access distributed information and use data semantics to gain a more compatible and comprehensive view across the entire organization;
- ICT allows increased management productivity (Turban, 1996).

Although ICTs are ubiquitous, their introduction and presence in developing nations doesn't necessarily mean that they are in sufficient number, in a good state and are used in a productive manner. Developing nations as their name indicates are countries that are in a developing state, their economy is struggling to reach a stable somewhat stagnate growth state and yet they are struggling to catch up with the present state of ICT in the developed nations.

For countries with limited foreign reserves, high unemployment rates and an urgent need to develop their economies, it is imperative that the technology is used

effectively. In fact many developing countries (DCs) are involved in ambitious programs to use ICT for accelerating their socio-economic development. Many have introduced the ICTs manufactured in developed nations. When introduced these technologies were regarded as a symbol of technology rather than an actual contributor to the developing world market. Current ICTs are solutions to the industrialized world the DCs have problems that are different from the developed (Walsham, 1995).

A number of constraints are already blocking the smooth running and development of ICTs in the businesses of these developing countries. One of these is the poor state access in many DCs to the global information infrastructure. Fortunately, as a result of the leap in technology, the inadequate state of telecommunications in many of these countries can be transformed into an advantage. The fact that telecommunications sector is lacking in both coverage and density means also that these countries are not burdened with extensive networks, built on obsolete technology. On the other hand the high cost of computers and software represents serious impediments to the countries access to the world of information and communication technologies. (ECA/ADF/N°1, 1999).

The African region is greatly behind other regions in the utilization of ICT. Complex socio-economic problems are major obstacles to the diffusion of networking

technology in the region. There is little awareness of the value that networking has for fighting under-development and thus it is the major bottleneck for implementation of ICT projects in major business organizations of these regions (Lishan,1996).

In much the same way there is currently no private telecom company operating in Ethiopia. The Ethiopian Telecommunications Corporation is operating as a monopoly not opening the door for other companies to move into the sector. No role is given to private sector in the development of ICT industry. Moreover, Ethiopia gives and continues to give great attention to other traditional non-technological sectors like agriculture, tourism, manufacturing, etc. Only few people in the country see much value in the new technologies, their political leverage in pushing for the development of ICT has been practically non-existent. Yet the use of these technologies and the benefits that they bring in to the business world cannot be denied.

During the last decade, there was an increase in awareness of ICT value. Changes in perception from initial resistance and mystification to understanding of the value of various technologies have been witnessed. Business organizations that have introduced these technologies are realizing that they can make a difference. The extent of use of these ICTs however, will continue to be based on the pace of

development locally and the attitudes of those implementing it. It is because of these that in some organizations ICT is being used as just a substitution of previous technologies, its actual application needs yet to be improved. To gain actual contributions or benefits out of these technologies, the adoption culture of ICT in the business environment is important.

II.4 ICT adoption and use

Traditionally, ICT has been used in organizations for the purpose of cost reduction and performance improvement; currently, its' role has grown to more pervasive areas. It assists organizations to gain competitive advantage in a quest for greater efficiency in business. It has improved the use of information for decision-making and enabled faster response to the customer needs. More radically, ICT has been identified as a key component in doing business in new ways and even transforming a business or sector. Table 2.1 shows some of the impact of ICTs on business.

Old Rule	Disruptive technologies	New Rule
-Information can appear in only one place at one time	-Shared databases	-Information can appear simultaneously in as many places as it needed
-Only experts can perform complex work	-Expert systems	-A generalist can do the work of an expert
-Businesses must choose between centralization and decentralization	- Telecommunication networks	-Businesses can simultaneously reap the benefits of centralization and decentralization
-Managers make all decisions	-Decision support tools (databases access, modeling software)	-Decision-making is part of everyone's job

-Field personnel need offices where they can receive, store, and retrieve and transmit information	-Wireless data communication and portable computers	-Field personnel can send and receive information wherever they are
-The best contact with potential buyer is personal contact	-Interactive videodisk	-The best contact with a potential buyer is effective contact
-You have to find out where things are	-Automatic identification and tracking technology	-Things tell you where they are
-Plans get revised periodically	-High performance computing	-Plans get revised instantaneously

Table 2.1: ICT into the business world (Adapted from Sohal, 1998)

The use of ICT in the business environment relies on how people understand its nature and trend. In companies in UK, Japan and US, ICT and business are tightly intertwined. There is a clear idea of the core processes and sources of competitive advantage and of how ICT will support them. This often translates into a long-term vision of an ICT infrastructure and architecture that serves the goals of the business. Integration also means that ICT and business unit staff must work together to develop a plan for ICT that becomes part of the business unit plan (Dempsey, 1998).

On the other hand, experiences of the industrialized countries show that ICT benefits don't always materialize (Fink, 1998). One major reason for ICT failure is poor ICT adoption practice. According to Fink (1998), ICT should be viewed as more than an automating force. ICT had been implemented earlier as a back-office function that attracted little management attention. For years most business managers had limited experience of ICT and they lacked the maturity of ICT and business judgement they need to make decisions driven by soft benefits (Dempsey, 1998).

Organizations were also facing continuous conflict between business needs and technology. In such cases, success often depends on bridging the gap between business managers who often know little about ICT and had not been involved in previous projects and ICT professionals often unaware of detailed business needs. Management in this regard needs to monitor employee responses to technological change, and institute appropriate action programs for ICT acquisition, implementation and operations (Earl, 1996).

According to Dempsey (1997) business organizations can be divided into four general groups according to their ICT adoption:- frozen in the past; in the abyss; competitive and leading .

(a) Frozen in the past:

Companies in this situation have typically avoided the cost and complexity challenges of distributed computing. As a result, they tend to have highly centralized ICT departments that are slow to respond to the rapid business changes of the 1990's.

(b)In the Abyss:

Some companies are spending more and more on ICT, but reaping diminishing returns. Their software development efforts don't deliver needed functionality on time. They are stuck in the ICT abyss. They are in and they can't get out soon.

(c)Competitive:

A fortunate few companies have managed to put the ICT abyss safely behind them. They have a robust and simple distributed computing environment, an up-to-date application portfolio, an effective new development process and an ICT budget that is firmly under control.

(d)Leading:

Leading companies are using ICT to create competitive advantage. Their ICT spending is focused on delivering innovations that competitors can't match. They are distinguished by their flexible and robust technology infrastructures, by their proprietary application supporting industry-leading processes, and by employing technology to support and generate business value.

Some of the major factors, identified by the developed nations, in facilitating ICT adoption include:-

- Organization size;
- CEO innovativeness;
- CEO attitude to ICT;
- CEO knowledge of ICT;
- Organizational readiness;
- Perceived benefits;
- Relative advantages;
- Competitive pressure

But, currently in most DCs, the use of ICT is a result of isolated initiatives without preconceived strategies. Equipment is being acquired by different business organizations with little coordination and planning. The fears that computerization causes unemployment, loss of potential jobs and job displacements are common. Many computerization projects are thus started because the money is available or, because companies eager to gain a foothold in strategic sectors donate computers.

In countries of sub-Saharan Africa, the adoption of ICT involved a tangible learning cycle and a level of investment that were difficult to achieve. Many businesses have been facing difficulties in coping up with the need for constant changes in skill

development. Assistance mostly comes from donor agencies on ad hoc basis and with various strings attached. The consequences of this kind of dependency can be viewed as the 'under-utilization' of existing technology, reinforced by inappropriate education, lack of awareness that often leads to acquisition of inappropriate tools. (Lishan, 1999)

In Ethiopia although computers were introduced nearly four decades ago, their utilization has been confined to the most rudimentary tasks. Computers are seldom used for gathering and processing vital data of strategic national importance or for decisions support, an area that has a great potential and benefit to the nation.

There is very little interaction between the agencies dealing with computing and/or information and those dealing with telephony and Internet services. Many in the government consider advanced telecommunication tools as technology 'gadgets'. They are not clear how ICT can be used to fight poverty and social isolation.

There is indeed a glaring lack of adequately trained manpower and awareness among policy and decision makers on the important threats and opportunities offered by ICT; an inadequacy in the degree of cooperation and networking arrangement for exchange of information; lack of maintenance capability for ICT tools; lack of harmonious efforts in the use of local languages in implementing ICT solutions and weak professional bodies (Kebour, 1999).

To overcome such difficulties bringing in outside help can be a solution. Experts in the ICT field can be consulted, making ICT consultancy a key to the adoption and use of these technologies.

CHAPTER THREE
OVERVIEW OF ICT CONSULTING

III.1 Introduction

ICTs are now part of the business world serving as one of the basic strategic tools. Many business organizations are making use of them eventhough the degree of capacity and capability may differ. As managers of businesses experience more volatile marketplaces, global competition, shortened product life cycles, customer pressures for tailored offerings and tighter performance standards, they increasingly depend on new information systems that involve ICT.

Keeping up-to-date and getting profits from ICTs' use became difficult as ICTs scale and range increased. Many business organizations are stuck with outdated equipment, others had ICT experts that couldn't cope up with the fast growing field, and yet others could not concentrate on their core business activity because they had to catch up with the new technologies. Companies have to retain the capacity to regularly adjust their positioning in each area; and sometimes radically change their chosen business strategies, ICT platforms, or arrangements for delivering services. Many engaged management consultants to deal with these strategic issues. According to Wilkinson (1995) management consulting is:

> "..an independent and objective advisory service provided by qualified persons to clients in order to help them identify and analyze management problems or opportunities. The management consultants also recommend solutions or suggest actions with respect to these issues and help, when requested, in their implementation. In essence, management consultants help to effect constructive change in private or public sector organizations through the sound application of substantive and process skills." p14

Although management consulting has its origins in biblical times, it became active in the mid-eighteenth century. In its early days the service of consulting was applied by accountants, followed by engineers (scientific management and industrial engineering). Then focus shifted to organizational planning, management development and training, administration policies and personnel administration. Services such as computer system analyses and inventory management were added in response to developments in information and communication technologies.

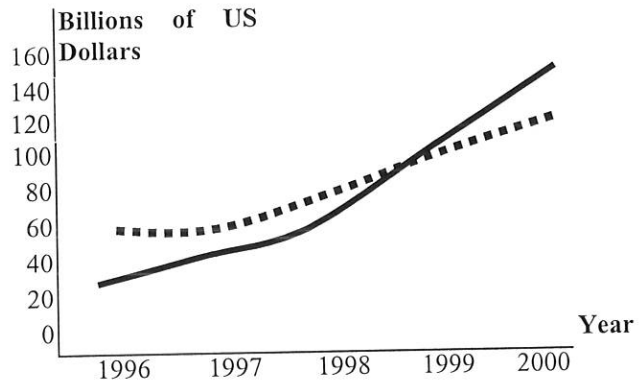
Management consultants now specialize in information systems, automated offices, financial analysis and modeling, budgetary and cost controls, organization structures, personnel compensation, strategic planning and a host of other areas. They are generally grouped under :- generalist management firms; public accounting firms; specialized consulting firms; individual practitioners; internal consulting group; research oriented organization and ICT consulting. According to Kubr (1996), Information and Communication Technology (ICT) consulting is :-

> "An independent professional advisory service contracted for and provided to organizations by specially trained and qualified persons who assist, in an objective and independent manner, the client organization to identify ICT problems, analyze such problems, recommend solutions to these problems, and help, when requested, in the implementation of solutions.", p 56

When business organizations make use of these kind of service it is referred to as outsourcing ICT. ICT outsourcing is defined as:

> " a decision taken by an organization to contract out or sell the organization's IT assets, people and or activities to a third party supplier, who in exchange provides and manages assets and services for monetary returns over an agreed time period. (Encyclopaedia Britannica, 1997)

ICT outsourcing became increasingly popular and is often used as a tool for coping with rapid changes in technology and in the business environment. In the developed world, it is probably the fastest growing and changing sector of management consulting (Wilkinson, 1995). In addition, the worldwide outsourcing market has continued to grow steadily. Figure 3.1 shows forecast for global ICT outsourcing market.



Year	Billions of US. Dollars	
	US	Non US
1996	60.6	67.7
1997	76.3	77.9
1998	96	89.3
1999	120.5	102
2000	151.1	116.2

Figure-3.1- Global IT Outsourcing Market Forecast (1996-2000)(Source: Currie, 1998a, p170)

The graph shows that the ICT global market is growing rapidly. ICT outsourcing market in United States is going faster than the other countries.

Coupled with the flourishing global outsourcing market place, the scope of ICT services being outsourced has been growing too. In fact the ICT outsourcing decisions have been divided according to the ICT services being outsourced. According to Currie (1998) and Lacity (1996), the major types are (a) total outsourcing, (b) multiple-supplier outsourcing, (c) selective outsourcing, (d) joint venture/strategic alliance outsourcing and (e) insourcing. The following are brief description of each of the above outsourcing modes:-

(a) Total Outsourcing:

Total Outsourcing is when an organization chooses to outsource as much as 80% of its ICT facility, usually to a large single consultant. This will help in the nurturing of a 'partnership' between client and supplier. The reasoning for total outsourcing is to enable the client to concentrate on its core business activities, thus leaving the supplier to manage the ICT facility, which is regarded as a support function.

(b) Multiple-supplier outsourcing:

In here, the client organization tends to safeguard itself from being dependent upon a single consultant, which ultimately will control all its ICT assets. It makes use of several experts at the same time. This type of outsourcing encourages competition

and innovation between consultants by ensuring that contracts are short-term and liable for renewal not necessarily with the same supplier (or combination of suppliers).

(c) Selective outsourcing

The practice of outsourcing selected ICT applications to vendors while retaining other ICT applications in-house is referred to as " selective outsourcing". Selective outsourcing locates selected ICT functions with external providers while still providing between 20 % and 80 % typically 24 % of the ICT budget. The vendor becomes responsible for delivering the result of the selectively outsourced ICT activities, while the customer remains responsible for delivering the result of the insourced ICT activities.

(d) Joint venture/strategic alliance outsourcing:

Yet another type of outsourcing is the joint venture/ strategic alliance outsourcing where an organization enters into a joint venture with a supplier on a shared risk/reward basis. This may involve selecting an existing ICT supplier or helping to create a new company to which work can be outsourced. In some respects it is a hybrid between external and internal ICT sourcing.

(e) **Insourcing :**

This is where an organization opts to retain a large centralized ICT department and insource management and technical capabilities according to the peaks and troughs of ICT work. This means that an organization either chooses to do all its ICT work in-house using its own permanent staff or combines this with external contractors hired for short-term periods to work on specific ICT projects.

These outsourcing decisions are put in effect by engaging the experts in the ICT field. These are the ICT consultants that will engage in the process of the outsource activities.

III.2 ICT consultants

An Information and Communication Technologies consultant is:

> " an individual qualified by education, experience, technical ability and temperament to advise or assist on a professional basis in identifying, defining and solving specific problems involving the organization, planning, direction, control and operation of the ICT system. The consultant serves the system as an impartial, objective advisor, and is not an employee of its organization. (Encarta, 1994)"

Services of ICT consultants are requested by business organizations because they are usually believed to provide expertise that the organization could not build internally. The services that these experts provide include:

- reviewing and developing ICT strategy;
- training and education in ICT;
- evaluating the ways in which ICT systems and facilities can be provided to the business;
- reviewing ICT performance;
- providing specialist guidance on areas such as data structures, technical architectures, system development , technical telecommunication or office systems;
- recommending or providing a second opinion on the choice of hardware or software;
- reviewing projects either at the outset or when they seem to be in trouble;
- managing projects;
- providing system development resources ranging from supplying individual contractors to the complete provision of an outsource development facility;
- establishing schedules for deliverables;
- communicating the progress and problems of proposed resolutions;
- identifying follow-on support opportunities;
- Submitting clear and valuable reports (Day, Kubr, 1996).

Engaging consultants involves taping a source of specialized expertise, which is not available in institutions. Thus, businesses usually utilize the following criteria when selecting consultants:

- relevant experience: references from previous clients can be checked here to find out about objectivity, awareness of human and organizational factors, and transfer of skills;
- specific skills: the particular skills required for the consultancy project;
- general skills: such as listening, communicating , enthusiasm, willingness to share expertise and work alongside in-house counterparts;
- availability: to meet any necessary timetable ;
- cost:- generally ranked low down the criteria list since cheap is by no means best for consulting to the public sector;
- approach to problem and understanding of requirements:- judged by talking to potential consultants or getting them to state how they will undertake their work. This can also be a point at which one can attempt to identify and reject biased, technology oriented, and dependency-creating consultants;
- personal contact: usually between someone in the office and the consultant (Heeks, 2000).

The outcomes from using these experts can be beneficiary to business organizations. Consultants may have past experience of similar situations that in-house staff lack. They possess special knowledge and skills and a variety of personal attributes that will help them therefore fill a knowledge gap. Consultants may also be able to rise above the internal politics of the organizations and propose, say, tough or unpopular options that an insider never could. They bring in fresh approach and objectivity. Precisely because the consultant is not a member of the organization, he or she brings objectivity and detachment to problems faced by the organization.

But the services that ICT consultants provide are not always hundred percent successful. According to researches (Apte 1997, Cross 1995, Currie 1988, Willcocks 1999,), conducted on business organizations of the industrialized world, ICT consulting has its own drawbacks. For example, consultants are engaged in short-term assignments, during which it is difficult for them to understand the realities of the organization that are critical to systems development: not just hard information and technical realities but also the soft political and cultural realities. Many consultants do not even look for soft realities because their role is frequently defined – normally implicitly – as being 'the voice of rationality'. Those that try to search for soft realities find staff unwilling to confide in them. This short-term contracts lead consultants to recommend or try to develop their 'standard solution' regardless of its applicability, therefore diverging so far from current realities that it is rejected as

patently unworkable or, worse, leads to an implemented system which fails wholly or partially.

Consultants are not superhuman and almost everything they do could be done by in-house staff already or with some injection of training and/or confidence. Thus staff are often demotivated when they see highly paid outsiders coming in to do something that they could have done themselves. It is even worse when workers see consultants hired who are all 'bluff' and 'bluster', but cannot do the job: these consultants either rely on in-house staff or propose unworkable systems.

Some consultancies are one-off and fail to provide the long-term support a project needs. Others may be continuous and create a dependency on the consultants who obtain 'revolving door' contracts. Systems introduced in this way may be abandoned immediately after the consultants leave or once the first problem arises. Failures may occur through generally the various combinations of:- treating ICT as an undifferentiated commodity to be outsourced; incomplete contracting; lack of active management of the consultant on contract and relationship dimensions; failure to build and retain requisite in-house capabilities and skills; poor outsourcing and contracting for development and new technologies (Heeks,2000).

The outsourcing service may limit the long term career prospects, may be difficult to specify requirements and is difficult in monitoring performance, explaining the business needs and specifications to an outsourcing consultant and potential for intellectual property rights violation.

The following part will look at what is the nature of ICT consulting from developing countries perspective with particular attention to Ethiopia.

III.3 ICT consulting in Developing Countries

ICT consulting in developing countries (DCs) is yet a field that is at its early stage and feared by some to engage into. But countries like Chile, Philippines, India and Brazil have shown that there is a great possibility for poor nations like Ethiopia. Major opportunities like **A**: export of services; **B**: export of packages; **C**: domestic services; **D**: domestic packages; **E**: various ICT applications niches are available to these countries. Figure 2 shows these five options in ICT consulting that could be taken by developing countries' ICT consultants.

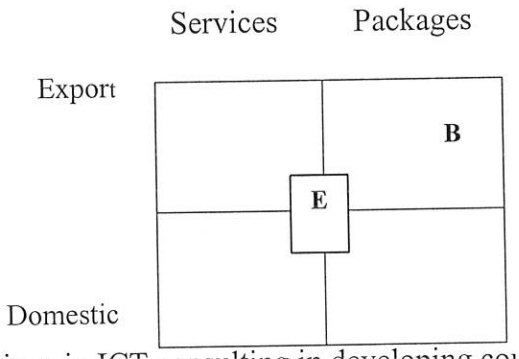


Figure –3.2- Options in ICT consulting in developing countries (Source: Heeks, 1999, p2)

Positions A &B: It is a successful strategy adopted by a few developing countries, but one that represents a universal remedy for all. Large amounts of development work take place at the client's site, i.e. by having developing countries' ICT producers fly over to work with the client. Pakistan, for example, exports around US$15million of software per year. Its main software exporters now manage their software export operations from offices in the US and employ US-trained Pakistani programmers. Most work undertaken by DC developers is relatively low-skill ICT construction and testing, leaving the high-skill tasks of analysis and design in western hands. Exporters from India—the third world's software export giant—do take on a limited number of '*cradle to grave*' contracts, but 80% or more of earnings come from the 'grunt work' of programming. Inter-DC markets are also growing: Africa, Asia and the Middle East are the target for around 5% of India's software exports, while Korean and Malaysian clients are outsourcing to countries like the Philippines, China and Vietnam.

Position C: Most DC ICT consultants simply do not have the revenue base to justify investing up-front in the research and development, advertising, sales and marketing necessary to make any significant hopes into even their local package market. High rates of package piracy squeeze an already small domestic market, with well over three-quarters of all software pirated in many African countries and less than 5% bought legally in China. This renders unit costs for marketing and distribution even

higher. Irrespective of price, quality and features, consumers in most developing countries seem to prefer foreign rather than local ICT consulting services.

Position D: The vast majority of DC ICT producers sit in this market segment, largely because it is by far the easiest for them to enter. Unfortunately, the domestic market in many DCs cannot yet be described as either sizeable or demanding. In countries like China and Indonesia, the figure is less than 20% and there is a 'technology lag' of some years behind the leading edge. This creates a 'domestic enclose' separated from the global market. This type of firms are referred to as 'small fish in a small pool' that do not grow and which get very limited exposure to new ideas and new technologies.

Position E: Alongside strategy A, position E represents the other main success story of developing country, with a theme of specialization for niche markets that include:

- Sectoral niches like banking, insurance, health administration, hotel management, mining and forestry;
- Application niches such as Web browser add-ons or text retrieval utilities; linguistic niches for regional languages like Spanish, Amharic, Swahili or Chinese.

With its initial roots mainly in the domestic market, this position is under threat as the market comes to the attention of Western eyes. They have started to localize

their packages—even some for niche markets—and to set up service subsidiaries. Nevertheless, through their local contacts and local understanding, DC consultants retain a 'knowledge advantage' that some can put to good use (Heeks, 1999).

III.4 The case of Ethiopia

The first mainframe computers were introduced in Ethiopia in 1960. These initial computers were concentrated in headquarters of ministries (finance, defense), central statistics offices and major public utility agencies (telecom, railways, electric power etc.). Along with the introduction of these computers in the country, information and communication technologies consultancy started with firms engaged in assisting organizations to implement the technologies. By the end of 1960, consultancy was mainly attached to major multinational companies such as IBM and NCR that opened mainframe support offices in the country. The service covered development of customized software for payroll and management of public utilities, sale of peripherals of imported equipment and training. (Lishan[1], 1999)

Increasing power of computers and pressures from various angles to adopt personal computers as office tools simulated consultancy activities in the country. In the 1990s ICT consultancy was strongly characterized by the wide spread of application training firms. A few of these firms deal with the supply of hardware and, to a lesser

extent, in software, although many are engaged in training in the applications and use of standard office software. Some specialize in the adaptation, customization or development of administrative and technical software.

In regard of Figure 3.2 where there are several options for developing countries in the ICT consultancy service, Ethiopia has yet to develop the necessary ICT industry to export services and packages. Current information and communication technology consultancy is limited to domestic services. Although capacities exist for producing domestic packages, there has not been incentive to achieve that. Promising opportunities in language based tools have existed for a long time, however minor efforts in the area were impeded by difficulties ranging from standardization to lack of expertise and software engineering discipline. However, the current environment in Ethiopia presents various opportunities that could be used as stimulus for growth of information and communication industry if properly managed. There are greater possibilities in the sector of domestic services and packages as well as export of services and packages (Lishan[1], 1999).

According to Adebabay (1999), eventhough technology has greatly spread in the country, ICT consultancy service is yet an ignored sector. He remarked that most people do not accept ICT consulting as worthy to use for the promotion of their management information system and for the fulfillment of their information need in

decision making process. Due to this, they rather look for advice from friends who have similar experiences. This generally produces undesirable results and it adversely affects the activities of the organization. This is usually the case for ICTfirms in Addis Ababa (Adebabay, 1999)

Since the current study focuses on Addis Ababa business entrepreneurs and their use of ICT consultancy, the following chapter will give a brief profile of Addis Ababa business.

CHAPTER FOUR
ADDIS ABABA BUSINESS PROFILE

IV.1 Background

Ethiopia, a landlocked country, is strategically located in the horn of Africa. The country covers an area of 1,127,127 square km with land of 1,119,683 square km and water of 7,444 square km. It has a population of over 60 million of which approximately 85% live in rural areas with annual population growth rate of about 3%. There are different ethnic groups like Oromo, Amhara, Tigray, Sidamo, Shankelle, Somali, Afar, Gurage and others. The official language of the federal government being Amharic, English is the medium of instruction and is widely used in business transactions, particularly banking and insurance. Others like Tigrigna, Oromigna, Guragigna, Somali, Arab are also spoken.

In 1995, Ethiopia adopted a new constitution that established the Federal Democratic Republic of Ethiopia. The Federal Government is responsible for national defense, foreign relations, general policy of common interest and benefits. The federal states comprise of nine autonomous states and two chartered cities vested with powers for self-administration (Encyclopaedia Britannica, 1997).

With a population of over 60 million, the country provides a steady and growing domestic market, which is one of the largest in Africa. The country is also a member of the Common Market for Eastern and Southern Africa (COMESA) agreement embracing 23 countries in Eastern and Southern Africa with a population of approximately 300 million. Exports and imports with member countries enjoy preferential tariff rates. Export products from Ethiopia to the European Union market are entitled to duty reductions or exemptions and freedom from all quota restrictions under the terms of the Lome convention. Trade preferences include duty free entry of all industrial products and a wide range of agricultural products including fruits, vegetables, pulses, oil seeds, etc.

Under the GSP (Generalized System Preference), a wide range of Ethiopia's manufactured products are entitled to preferential duty treatment in the United States of America, Canada, Switzerland, Norway, Sweden, Finland, Austria, Japan, as well as most European Union countries. Besides, no quantitative restrictions are applicable to Ethiopian exports on any of the 3000-plus items currently eligible for GSP treatment (CIA, 1999).

a. Investment areas

Ethiopia's industrial policy is based on Agricultural Development Led Industrialization (ADLI) strategy, whose main objective is the gradual structural transformation of the economy from agricultural to industrial development using the country's human and natural resources. The government has embarked upon an extensive program of divestiture of state enterprises with a view to curtailing government's role in the production of goods and services. Since early 1995, a total of 125 public enterprises (including retail businesses, hotels, restaurants and factories) have been privatized under the mode of 100% sales of ownership of the businesses or factories to the private sector. Many additional state enterprises have been listed for privatization. These include cotton farms and grinneries, yarn mills, textile fabric factories, fiber mills, tanneries, leather goods factories, horticultural farms and fruit and vegetable processing factories, hotels, food factories and others. According to the Ethiopian investment authority guidelines (1998-1999), the following are few examples/areas where investment in the country is possible:

Food crops: great opportunities exist for commercial production and processing of food crops. Some pulses can also be produced or processed for the export market. Favorable agro-climatic conditions also exist in the southwestern parts of the country for introducing the production and processing of palm oil and ghee.

Coffee: Ethiopia is the original home of coffee. The country produces some of the best coffee in the world and coffee is the country's single most important export crop.

Cotton: there is a huge potential for the expansion of cotton especially in the Omo-Gibe, Wabi-Shebelle, Baro-Akobo, Blue Nile and Tekeze river basins.

Tea: currently there are 1 300-1 500 hectar of land under tea cultivation and both domestic markets and exports are growing steadily.

Sugarcane and spices: considerable opportunities exist for the production of sugar and spices for both domestic and export markets.

Horticultural development: the agro-climatic conditions of Ethiopia are suitable for the production of a wide variety of horticultural crops, notably fruits, vegetables, flowers and shrubs. The involvement of the private sector is highly encouraged in both the production of edible fruits and in the production and marketing of flowers, horticultural seeds and other ornamental crops.

Livestock development: the country has numerous commercial cattle breeds, extensive land for ranching and a proven export potential for live animals and

livestock products. Private investors are highly encouraged to participate in the areas of commercial breeding, production and processing of meat, milk, eggs and animal feed.

Fisheries: Ethiopia's extensive inland waterways and lakes contain substantial proven reserves of fish and other aquatic resources. The development of this sector is currently constrained by lack of cold storage and transport facilities, poor fishing equipment and inadequate processing capacity.

Bee keeping and apiculture: the flora of Ethiopia is very heterogeneous. There are about 10 million bee colonies and over 800 identified honey source plants in the country. Studies have shown that under modern management, the traditional yield of 5kg of honey in one harvesting season can be improved to 15-20 kg. Such vast and untapped potential suggests that apiculture provides opportunities for substantial new investments and vastly increased commercialization.

Commercial forestry: potential activities for private investors in this domain include:

- The production and marketing of gum and incense;
- Commercial plantation, e.g. Timber;

- The production of Neem trees and Pyrithrium as sources of raw materials for plant protection chemicals;
- The establishment of integrated forest-based industries such as pulp and paper, particle board and chip-wood production, based on plantations of eucalyptus, pine and incense; and
- The establishment of rubber plantations and the production of ornamental tree seedlings and shrubs.

Agri-business: at present Ethiopian does not produce mineral fertilizers. However, some initiatives are being taken to produce these chemicals based on the country's natural resources. Hence potential investors are welcome to participate in the production of different kinds of plant protection chemicals and equipment, for which there is likely to be an increased demand as agricultural growth continues.

Food and beverages: processing and preserving of meat products; integrated production, processing and preserving of fish and fish products, processing and preserving of fruits and vegetables; integrated production and processing of dairy products, manufacture of starch and starch products, processing animal feed; manufacture of sugar; manufacture of brewery, mineral water, winery, soft drinks, etc.

Tannery and leather goods and articles: integrated tanning up to finishing, manufacture of luggage, handbags, saddles, harness footwear and garment.

Textile and garment: the factories were set up primarily for import substitution purpose and as such were neither technically nor managerial equipped to enter the export market. But they could easily be rehabilitated with an extension of marketing networks, and enhancing human resource capability and financial strengthening.

Mining: Ethiopia offers very good prospects for mineral prospecting and development. With regard to fossil energy resources, there are significant opportunities for oil and natural gas in the four major sedimentary basins of the country, namely the Ogaden, the Gambella, the blue Nile and Southern Rift Valley.

Tourism : given its unique cultural heritage, magnificent scenery, pleasant climate, rich flora and fauna, important archeological sites and friendly and hospitable people, Ethiopia has the potential to be one of the leading tourist destination in Africa. Despite the enormous potential, the tourism industry has not developed sufficiently to make significant contributions to the economy. Nevertheless, the more enabling environment of recent years has resulted in a steady increase in tourist arrivals that reached 120 thousand in 1995/6. The available tourism infrastructure is, however, inadequate to cope with the growing tourist traffic.

Hence, great opportunities exist for private investment in hotels, lodges and international restaurants.

Information and communication technology field is another area of investment that has limited government focus. There is overall consensus that investment in ICT requires direction and the necessary infrastructure.

b. Infrastructure

Ethiopia has vast hydro-power and promising geothermal energy resources. Its hydro-power potential has been estimated at about 650 billion kwh/a. To date the aggregate electricity generated is a mere 1.2 billion kwh/a, which is much less than one percent of the potential. The present regional distribution system of electric service is undertaken through the inter-connected system (ICS). The main industrial towns are all connected into this national grid. Almost the entire ICS capability is provided by the five hydro-electric power plants at Fincha, Koka, Awash II, Awash III and Melka Wakena. A sixth hydropower plant at Gilgel Gibe , with an installed capacity of 180 MW, is scheduled to become operational soon (AABD, 2000).

Ethiopia is also in the process of improving its telecommunications facilities, which are relatively efficient by Sub-Sahara African standards. Direct microwave links

connect all regional cities, and a number of smaller towns have automatic telephone services. International communication links are maintained through two satellite earth stations, providing telephone, telex, fax and television services. Microwave links exist with Kenya and Djibouti (Encyclopaedia Britannica, 1997).

c. Addis Ababa

Addis Ababa largest chartered city, the seat of the federal government of Ethiopia, lies in the central plateau at an altitude of 2400 meters, 9^0 degree north of the equator with an average of temperature 16^0 C. Addis Ababa was founded as a capital city of Ethiopia in 1887 and has to date a population of about 3 million (Encyclopaedia Britannica, 1997).

Addis Ababa is the hub of the nation's transportation network. The road transport system is the most important means of transport, providing for over 90 percent of passenger and freight transport in the country. Both asphalt and gravel roads go out from Addis Ababa to important cities, towns and centers of commercial, industrial and agricultural activity. For the vast majority of Addis Ababa's residents, transportation is a local or regional endeavor. International highways link Addis Ababa to neighboring countries like Djibouti, Eritrea and Kenya. An international airport also serves the city (www.macalester.com).

Energy is required in household, industrial, agriculture, transport, mining construction, commercial, as well as in public education and health sectors. Power supply to Addis Ababa area, as part of the inter connected system (ICS) delivered by the ICS hydro power plants. The power transmission system in Addis Ababa consists of 230, 132 and 45 kilo volt high voltage transmission lines and 15 kilo volt low distribution line. There are 13 substations in Addis Ababa area which distribute bulk amount of power to different load centers through 15kilo-volt distribution network at the distribution level. The 15-kilo volt installed capacity of the stations in Addis Ababa area is 340mva.

There is a medium term development program (1996-2000) being carried out for the expansion of business services and include modernization as well as diversification of services. A huge increase in available telephone lines is envisaged. VSAT stations are also planned to be introduced to modernize telecommunications and lay the ground for diversification. Addis Ababa is ambitious in its attitude towards communications improvements. Though expansion of the wired communications network will offer more residents immediate telephone access, the Ethiopian Telecommunication Corporation (ETC) is focusing its efforts on wireless communications. The government has projects in both mobile and satellite communications and hopes residents will be able to make a leap from no telecommunications to wireless telecommunications (MEDaC ,1999)

IV.2 Addis Ababa Business profile

Addis Ababa is a primate city because it has played for long the domestic role in politics and government of the country, international role with an international circuit greatly influencing the urban economic base; role within the general mechanisms of withdrawing net marketable agricultural surplus from the richest cereal and coffee growing regions.

A number of categorization of business activities are available: private and public, informal and formal, commercial and administrative, service and production, etc. For the present study the business activities classification of informal and formal sectors have been chosen. The informal sector is an indigenous sector with a much lower economic order. Its labor-intensive technologies and simple production characterize it.

Recent introduction of market economy has given impetus to the rise of employment in the informal sector. Fast growing population combined with unknown size of retrenched civil servants from various public enterprise and the demobilization of ex-servicemen have swollen the size of the informal sector in the urban areas as it has become the source of income and employment opportunities mainly for people in lower circuit. The informal sector is predominately small in scale, financed by small amounts of local capital, indigenously owned and often based on the family

and kinship network. The enterprises are labor intensive with limited technology. The informal sector represents a traditional way of life where the objective is not merely profit but also the effective employment of the family; jobs that offer little return may be regarded as useful activity if they employ an elderly relative or small child.

The informal sector includes activities starting from handicrafts up to service giving and trade. The handicrafts activities including spinning, weaving and finishing textile; wood and metal workshops; tailors; oil and floor mills; knitters and millers; shoes makers; goldsmiths and jewelry and related articles; etc.; retailing including small shops –suk- ; stalls refreshment booths; groceries; butcheries; sellers of home-made species; fruit and vegetables retailers and other food suppliers; open air retail activity-gulit-; retailers of textiles; leather and shoes; retail shops of building materials, wood charcoal ; housing utilities, woodworks; informal trading ; handicraft products; canvas and rubber; food retailing; etc..; and service including - metet bet-; bas and restaurants; laundries beauty saloons ; barbers shop; tire repairing; radio and watch repairing; maintenance and repair of motor vehicles; sales of parts and accessories; etc.. are few of the examples (Getachew, 1997).

On the other hand the formal sector predominately western oriented has a modern dependence patterns of investment. The formal sector of the urban economy

includes government, 'westernized' commerce and bureaucracy, capital business and modern manufacturing activity.

As the present study focuses on the formal sector our discussion here onwards will emphasis the business condition of this sector.

a. Areas of business

The businesses found in this formal sector are characterized by large number of small and medium scale organization and a few number of large-scale industries. The major six divisions used by Addis Ababa Chamber of Commerce are adapted here to classify the business activities of the city. These include export, import, manufacturing, agency, service and those engaged in more than one activity.

Those involved in export are engaged in activities like bees wax, bones, horns, hooves, coffee, chat, cotton, dairy products, fish and fish products, goats, handcraft products, hides and skins, honey, leather articles, marble, precious stones, tea, souvenirs national dress, seeds, textile fabrics, wildlife, wine, etc..... The importers are involved in agricultural machinery, battery and tire, building materials, computer and accessories, consumer goods, cutlery, electronic products, fertilizer, furniture and fixture, harvesting and treshing machinery, household items, iron and steel,

lightweight vehicles, medical instruments and appliances, optical goods, petroleum, plastic goods, razor blades, scientific instruments, sport materials, tractors, wire products, yarns and threads.

Those involved in agency are commercial agents, commercial brokers, commercial representative and commission agents.

Manufacturers are involved in : alcoholic beverages, baking machines, beer, bread, bulbs, candle, candy, canvas products, carpet, cotton, dairy products, floor tiles, flour mill, gas, household and office furniture, leather articles, margarine and honey, paints, poultry, roof sheets, shoe polish, socks, soft drinks, steel wool, sugar, table sea salt, textile fabrics, tobacco, tires and accessories, umbrella, weighing machines, wine woolen products, etc.

Those involved in service giving are in : advertising , audit service, bakery, banking, beauty saloon, books trade, broker service, business information, car dealers, clinics, cosmetics sales, edible oil sales, electric power supply, engineering workshop, fish trade, flower and seeds sales, garage, gift articles and souvenirs, glass works/photo frames, honey trade, insurance, kitchen utensils, laundry, lottery, metal works, neon lights, pension, printing service, publishing, restaurant, super markets, sweater sales, tour and travel agent, translation, typing school, vehicle body work, veterinary

drugs, welding and machine work, wood work retail, yarns and threads sales. Service giving industries, importers and those that are engaged in more than one business activity are approximately 80% of the total, whereas the other 20% are involved in export, agency and manufacturing (Asrat, 1996).

b. Opportunities

According to Region 14 administration review (1999), the government has been creating conductive environment for the development of the sector which among others include:- -reforming the pubic manufacturing sector; -introduction of freely accessible and partly liberalized foreign exchange market; -lifting of government control on markets and prices; -the encouragement of private investment activities; -adjustment of taxes and tariffs. With these, there are great opportunities for Addis Ababa businessmen in all sectors. The following are few examples:

The manufacturing sector is at an early stage of development, currently accounting for about 10 percent of GDP and 9.5 percent of employment. There are a number of manufacturing industries of all sizes, mainly engaged in the production of food, beverages, tobacco, textile, leather and foot wear, paper, metallic and non-metallic mineral products, cement and chemicals. Major manufacturing opportunities offering attractive potential benefits to prospective investors are in the food and

beverage, leather and textile, chemical and paper, electrical and electronic, building materials, and non-metallic mineral and metallic industrial sub-sectors.

Opportunities exist for private investment in the following services:

- Exporting the country's various products by way of undertaking market promotion, quality improvement or packaging;
- Construction, comprising first grade contracting and rental of construction machinery as well as real state development;
- Social services, such as health, and education and sports facilities;
- Other projects in these sectors to be identifies by potential investors.

In term of investment, Addis Ababa has the lion's share, ranked first for it is attracting over 50% of the approved capital for most years. In the year 1997/98 alone, about 59% of the total approved capital were planned to be invested in Addis Ababa.

Most of Ethiopia's service industries are located in Addis Ababa. Banking and insurance services are also concentrated in the city and the nation's major newspapers are published there. The bulk of the export and import of the country is channeled through Addis Ababa on its way to or from the ports of Djibouti on the Gulf of Aden.

c. Challenges

Addis Ababa still depends greatly on foreign aid to stabilize the economy. Investment in businesses and government efforts in the city come in the form of donations and loans from foreign governments and the World Bank. Many governments and corporations have resisted in the past investing in Addis Ababa for three primary reasons that are:- the complicated and inefficient bureaucracy of the local and national government; the local land lease system fails prospective investors because parcel sizes are unrecorded by the government; and copycat investors crowd the market and offer competition, which discourages further investment.

Other constraints for business improvements are:- the long delays in allocating land for investors; high collateral requirements (more than 100%) of the banks has a stifling effect on domestic investments when seen from the relative smallness and strength of private domestic capital; lack modern managerial technical and marketing skills and hence, domestic entrepreneurs do not identify new business opportunities and take calculated business risks to enter into new areas of activities; long and tedious bureaucracy procedures and practices are being used in some offices which still discourages private business initiatives; inadequacy of infrastructural facilities: investors have difficulties to acquire power, water supply and telecommunications services to operate their business (Corrado, 1996).

d. Overview of ICT use

The city hosts the Ethiopian Telecommunications Corporation and the National Information and Computing Center that is responsible for centralized information and communication regulation. This provides the city with greater exposure in the consumption of information and communication technologies. The major users of ICT are those that are involved in manufacturing industries and services giving sectors.

Like in any other part of the country, Addis Ababa businessmen are also faced with problems regarding their ICT use. Some have brought it in as a technology with no application. They assume that having the technology is a solution for all their problems. But with time the ICT purchased is placed on tables of the users or in the store without having the appropriate software to run on it and becomes obsolete without giving any benefit to the client. Some are put aside because no one knows how to handle them. Some are far behind others who have used ICTs for competitive advantage, it has been witnessed these organizations are lagging behind and are not able to react (Teshome, 1997).

Taking this opportunity and going along with the current lifestyle, ICT consultants have emerged with the aim of reducing the problems and at the same time supplying

hardware and software and providing training. These consist of hardware and software consultants, data processors, those that perform maintenance and repair of office , accounting and computing machinery, other computer and communication related activities.

This study aims to investigate the use and non-use trend of these ICT consultants by Addis Ababa business entrepreneurs. The following section presents the methodology used in analyzing ICT consultants use and non-use in Addis Ababa.

CHAPTER FIVE
RESEARCH METHODOLOGY

V.1 Methodology

The study utilized two different set of sampling methods to investigate the ICT consultancy use of enterprises and ICT consultant.

a. Sampling method used in selecting business enterprises

The population for the research study is the Addis Ababa business entrepreneurs. But as size of population is large and as data on informal sector is unavailable, the study focuses on licensed and registered formal sector businesses. The sampling frame consists of the business firms that are listed on Addis Ababa Business Directory of 1998/99.

The Addis Ababa Chamber of Commerce prepares the directory with a list of members that represent a full spectrum of business and industry in the city. The chamber is part of the international chambers of commerce that spans the world. The activities of the chamber of commerce include providing information to importers

and exporters, agents and distributors, undertaking export market research and market trend analysis.

The Addis Ababa Chamber of Commerce directory was chosen as a starting point to carry out the study. Information from other sources such as the Ministry of Industry and Commerce was found to be inadequate to this study when compared to the Addis Ababa chamber of commerce due to its obsolescence.

The directory of Addis Ababa Chamber of Commerce lists over 3810 local entrepreneurs from which samples were taken for this study. The sampling frame was arranged by business activities. This includes export, import, agency, manufacturing, service and those that are involved in more than one business activity. The strata consist of 226 exporters, 600 importers, 301 agents, 264 manufacturers, 1472 services providers and 1919 business firms which are involved in more than one activity.

The method of stratified sampling was used for this case. According to Dane (1990), stratifying helps maximize accuracy in a sample because it ensures that certain known population proportions are matched in the sample. Stratified random sampling is a method of obtaining a greater degree of representativeness decreasing the probable sampling error. Rather than selecting a sample from the total

populations at large, this method insures that appropriate number of elements are drawn from heterogeneous sub-sets of the population.

The ultimate function of stratification then is to organize the population into homogenous subsets (with heterogeneity, between subsets) and to select the appropriate number of elements from each (a homogenous population produces samples with smaller sampling errors than does a heterogeneous population). The effect of stratification is to insure the proper representation of the stratification variables to enhance representation of other variables related to them.

As there are five sampling frames, the next step is to select the appropriate number of elements from each. Using a simple random sampling every 25th item from each stratum was taken as 9, 24, 12, 10, 20 and 76 respectively, resulting in sample size of 151 as shown in the following table.

Sampling frame	Business activities						Total
	Export	Import	Agency	Manufacturing	Service	More than one	
Strata	226	600	301	264	500	1 919	**3 810**
Sample (25% of total)	9	24	12	10	20	76	**151**

Table-5.1- Population and sample of Addis Ababa Business Entrepreneurs (AABD 1998-99)

b. Sampling method used in selecting ICT consultants

The source of information for IC consultant was the Ministry of Finance. A Government Procurement Unit (GPU) of the ministry that is responsible for maintaining a record of vendors/suppliers involved in the different business activities was consulted for data. The unit maintains a database with information on the vendors, their addresses, initial capital, business type, previous contract, etc.

The database began in April 1999, and is being updated every month. The data is gathered from registration of vendors. Upon registration vendors are provided with a certificate that enables them to participate in any government tender.

The ministry of finance also maintains a performance evaluation of the vendors. According to this evaluation if the vendor/supplier firm is found doing unethical business, it can be suspended from participating in government tender for a given time and its certificate could be revoked. And a circular note will be sent to the government offices updating them with its current state.

As there is no other formal list apart from that of the Ministry of Finance it was used for the study. As of January 2000 there were 158 firms involved in ICT consultancy. It was found difficult to contact all of them, thus a sample was taken. First, those that have not undertaken previous contract were left out. This resulted in 56 firms

that were involved in actual consultancy. Then, those with less than three contracts were removed. It was believed that previous contract is an indicator of prior experience. The final number was 34 firms.

V.2 Data gathering instruments

In order to gather the required data the following methods are used:

a. Questionnaire:

A questionnaire consisting of both close and open-ended questions was used to gather data on business entrepreneurs. Closed ended questions were used because they are easier and quicker for respondents to answer, easier to compare of different respondents and easier to code and analyze. Open ended questions were used because they permit an unlimited responses, respondents can answer in detail and can qualify and clarify in some instance, unanticipated finding can be discovered, permit creativity and self-expression.

A draft questionnaire was prepared and circulated to a number of business organizations for proof reading and comments. Based on the feedback received, some questions were deleted and modified accordingly. The questionnaire in the study was divided into three parts. The first part was used to gather company data,

respondent profile and nature of business involved in. The next section investigated the actual ICT use of the business firms. The respondents were asked to state what technologies that they make use of and to what extent they are dependent on them. The third section dealt with the use of ICT consultancy. This section includes questions like why business firms use consultants, who is responsible for the decision, what type of consultants they use and what is the nature of consulting and respondents were asked to list the success and failure factors of their activities.

The researcher distributed the questionnaires to most business firms. Collecting filled questionnaire was difficult because of bureaucratic factors and unwillingness of respondents. After some time a few other companies were sent the questionnaire through electronic mail. This boosted the response rate. For few firms that were willing to answer questions but had no time to go through the questionnaire an interview schedule based on questionnaire was used.

b. Interviews:

Semi structured interviews were used to gather information on consulting firms.

The semi-structured interview was used with a set of questions from which follow-up was possible, enabling to explore and expand on ideas and fully explore the behaviors and opinions of the respondents.

The interviews sought data/information on a range of topics. They included:- respondents profile, history leading to the creation of the ICT consulting firm, educational level of experts of the organization, type of service provided, contract negotiation, relationship with business organization.

Chief information officers and others that are directly related to the consulting process were interviewed. Depending on the willingness of the interviewee, the interviews were taped otherwise in most cases notes were taken. In a few cases where ICT consultants were busy for an interview, they were approached with the idea of a questionnaire and when willing the questions of the interview were restructured and sent to them through electronic mail for them to answer when they have the time.

c. Document analysis:

Data and information from different research documents, periodicals, books and other literatures were gathered and analyzed to supplement research findings.
Prominent experts in the filed of ICT were also contacted for further clarification and opinions in some aspects of the study.

The data was then analyzed using standard quantitative techniques like percent and ratio. And data in qualitative format was treated accordingly. The following section describes the result of the analysis.

CHAPTER SIX
SURVEY RESULTS

This chapter presents the findings of the study into two parts. The first part presents the information found from the questionnaires that were distributed to the business enterprises, the second part presents the information gathered from the interviews with the ICT consultants.

The survey results are presented under the following subtitles: organization/respondents profile, current ICT presence and role in the business, consultancy decision, selection of consultants and assessment of benefits.

PART-I- Findings from the questionnaires

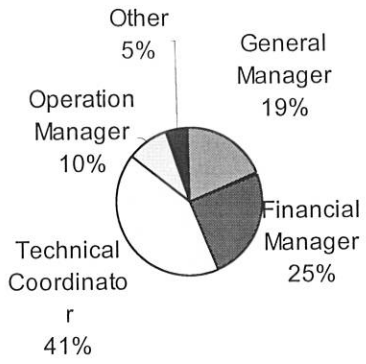
One hundred fifty 150 questionnaires were distributed to the different organizations that were selected in the sample. Out of the total, 57 were returned but only 44 questionnaires were useable. Thus the response rate was 26%. The response rate is very low because the respondents were not willing to respond, had not time to fill the questionnaire and most critically at the same time of data collection the internal revenue office was gathering data for tax estimation which made the respondents more hostile and unwilling. Eventhough the response rate is low it was found out that it is comparable to other similar studies conducted recently (for example a

useable response rate of 14% achieved by Sriram et al (1997) in their study of IT investments in purchasing and a response rate of 15.61% achieved by Sahol et al (1998) in their study of the role and impact of IT in Australian business. Thus the 26% response rate was taken as a reasonable, useable representation of the sample.

(a) Organization profile

The respondents to the questionnaire held various positions in their organization. Nearly 42% of the respondents were directly associated with the ICT function. The majority had title of technical coordinator. Financial managers usually given most ICT purchase responsibilities account for 24.6%, the general manager 19.9% and 5% made up the remainder of the sample. Figure 6.1 shows the breakdown of the respondents.

Figure-3-: Position of ICT related decision-maker in the company



Over 75% of the respondents represented local firms whereas the other 23.7% represented satellite offices to multinationals. Seventy percent (70.6%) of the respondent organizations are independent companies with a remaining made up of 17.6% division or subsidiary of corporate and others 11.8%.

Results of their activity are shown in table 6.1. The majority of respondents were involved in more than one business activity accounting for nearly 35% of the sample. Service industries account for 25% of the sample, manufacturing sector accounted for 15%, import 10% and the rest 14% goes to export agencies.

Business Activity	Percent
Export	9.1%
Import	10.4%
Agency	5%
Manufacturing	15.7%
Service	25.6%
More than one	34.2%

Table-6.1-Company's business activity type

Activities that these businesses are involved in are : publishing, tour and travel, digital printing and engraving, construction, installation of telephone exchange, office and home furniture, electrical materials, security system products, flour mills, windows and door builders, shipping, freight forwarding, custom clearance, transportation and trading, coffee export, gun-storm import, iron sheet, diesel engine, hotel, insurance, banking, bee wax producers, electronics security system, safety and fire detection and protection systems.

The sample organizations have a management body responsible for administrative functions and accounting section responsible for all financial activities. Depending on their businesses they have technical department, production and sales, service and communication public relation departments.

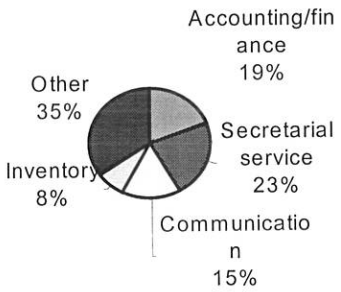
It is mostly the technical department that is responsible for the ICT functions of the organization. Experts are diploma holders (in computer science, mathematics), degree holders (in engineering, accounting, and in a relative small cases computer science graduates) , having a training certificate or graduated from technical training school. Their number differs from organization to organization with a general figure of one up to three on average.

(b) Current ICT presence and role in business

Respondents were asked what were the technologies that their company makes use of currently. Eighty two percent (81.8%) of them use computers, 50% have facsimile machines, 93.75% have telephones (this figure represent both office and mobile phones) and 36.8% make use of Internet or e-mail services and few of them make use of telex, technologies for printing process, photocopies and scanners.

Many of the applications are for accounting, communication, secretarial services, inventory management, computer engineering design, networking, business information, office automation, digital printing and engraving. Accounting and finance account for 19.2% of the overall applications, secretarial services 23.0%, communication 15.3%, inventory management 7.6% and the remaining 34.9% is for other activities such as computer engineering design, networking, business information, office automation, digital printing and engraving, etc. Figure6.2 shows these companies ICT uses.

Figure-4-: Company's kinds of ICT uses



In almost all cases the top management makes decisions regarding ICT. The other staffs or departments have little involvement in the process or are consulted for just formality. One of the respondents remarked that:

> " We have in our organization two computers, that sat idle with no use for years. Yet recently management decided to purchase two other latest computers that had office 2 000 loaded onto them with much greater efficiency. " (Operation manager)

It is only in a few cases that a steering committee takes over the decision of the ICT purchase. In all cases management has the final word.

Once purchased and used, users become dependent on ICT. Respondents were asked to rate their dependence on these technologies. Forty one percent (41%) of the respondents said they were fully dependent on the ICT because their business relies

on it. According to one tour and travel agent ICT remains fundamental to the job itself.

> " We fully depend on these systems. Without these technologies, we might as well close the office and go home, because we cannot make reservations, cannot communicate with our users. " (Travel and tour agent)

A technical coordinator of an import agency noted:

> " As importers and suppliers we cannot think of our business without the use of these communications equipment, computer and related machines so we fully depend on these technologies." (Technical coordinator).

Apart from these, 47% were moderately dependent on these technologies and another 12% do not depend on them.

In relation to the above, respondents were asked where they would put their organizations in the ICT landscape. Thirty one percent (31.3%) are not yet fully developed in ICT use; 43.7% are keeping up to date but facing some problems; 18.8% are keeping up to date and competitive in their business activity; and 6.2% are keeping up to date and are comfortable with their current status of ICTs. Table 6.2 shows this.

ICT landscape	Percent
Frozen in the past	31.3%
In the abyss	43.7%
Competitive	18.8%
Leading	6.2%

Table-6.2- Position of company's in the ICT landscape

(c) Consulting decision

When asked what measures are taken when the business is faced with ICT related problems the respondents answered that in 41.1% of the cases management handles it, 9% of the cases that steering committee handles it; 27.2% cases seek outside help (outside help can be in the form of friends, acquaintances, suppliers and consultants in the field of ICT.), and other 22.7% responded that all depends on the nature of the problem.

Those that use in-house services are usually moderately satisfied with their outcomes. The high rate of management involvement in ICT project shows that there is still limited involvement of users in ICT decisions.

It was found that 37% of the respondents make use of outside ICT consultant experts and the other 63% do not consult these experts. This figure shows very low rate of ICT consultancy use compared to high level of management involvement in ICT decisions.

The respondents that used consultants were asked the type of consultants they use : 54.5% said they engage domestic consultants whereas the 45.5% engage foreign consultants. These respondents use foreign consultants because they believe that foreign consultants will do better jobs than the local ones. A respondent witnessed this by indicating:

> "We use foreign consultants because they have better training, better knowledge and in fact isn't the technology's root there? they are the ones who created it so they are in a better position to fix it or advise us on anything related to it." (General manager)

Another respondent noted:

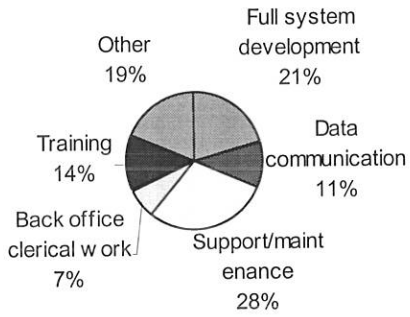
> "Using foreign consultants will have its own benefit, along with the contract, they provide training and site visits abroad for in-house staff." (Financial manager)

The decision to explore the possibility of using ICT consultants may arise from technical manager, steering committee, operation manager, sales and marketing manager but the final decision word goes in almost all cases to the management with sometimes the assistance of technical manager and coordinator.

The specific ICT functions that the respondents outsource or give out for consultants are: development of a fully integrated system including hardware, software and

networking; data communication; support/maintenance; data entry; back office; training; disaster recovery and other. The overall figure is given in the figure 6.3.

Figure-7-: Company's ICT functions that are outsourced



Thirty nine percent (39.1%) of them give out totally all their ICT functions to be performed by the consultants, 30.5% use a joint venture / strategic alliance strategy in their outsourcing, 21% use a selective method by picking only those activity that need crucial attention and 8% make use of several consultants by giving different activities/ functions to each of them. Table 6.3 shows the breakdown.

Type of Consulting	Percent
Total	39.1%
Multiple	8.7%
Selective	21.7%
Joint venture	30.5%

Table-6.3-Company's type of consulting/outsourcing

The contract duration of these agreements goes normally from six months up to 5 years. According to a general manager:

> "Normally entering into an agreement with a supplier to import items does not take more than a month. If on the other hand we embark on a big project, the contract could take up to 6 months depending on several factors. Which among others things include timely delivery of the required equipment on site."

(d). Selection of Consultants

ICT consultants are usually contacted through:- advertisement, recommendations or communicating particulars, invitations to tender, nearest and familiar firm, through friends and acquaintances.

In case of invitation to tender, ICT consultants are requested to provide information like:-

- specifications for the work required under the contract to be entered;
- duration of contract;
- the number and technical and ICT qualifications of the staff they propose to engage for each schedule which they are bidding for;
- contract price for each year/each schedule to be performed;
- their office conditions;
- ICT equipment and accessories;
- ICT training, etc.

After the submission of the proposals, generally it is the management and the selected committee who are responsible in opening and evaluating the consultants.

In case 'they didn't use tender bids', respondents were given a set of criteria choices that they may use to perform evaluation and selection of consultants and thus responded: 12.5% request information from vendors; 18.7% request consultants that have previous experience in the relevant area and have proved themselves in some way and those that participate in the management of ICT functions that are consulted; 25% look out for cost reduction; and 43.8% look for other qualities. However the criteria is generally not straightforward.

After selection of consultants in the majority of the cases respondents said that the time gap for the actual work to begin is from six months up to one year.

(e). Assessment of benefits

Respondents were asked to list down the advantages and disadvantages that have implications in their ICT consultancy use and the following are summaries:

Expressed advantages of the use of domestic consultants according to order of priority:

- Unnecessary and unevaluated spending in ICT is reduced because the use of consultant makes the choice more expert wise;
- Greater access to leading edge technology and know-how is gained and organization are more exposed to the chance of updating their organization in timely and accurate ICT;
- The consultants bring in new idea that in-house staff didn't think of;
- They solve problems and facilitate the business by bringing in their expertise;
- Because ICT related activities are contracted out for consultants the firm will have time to focus on strategic use of ICT in business;
- Access to support service is easily available;

Expressed disadvantages of the use of domestic consultants according to descending order:

- The use of consultant is expensive, it needs capital investment in new technology;
- Explaining needs to consultants is sometimes difficult;
- Giving away ICT functions to be performed by outsiders will jeopardize the integrity of company's secrets and intellectual property;

- Sometimes the competence level on the side of the consultants is low that effective services are not achieved;
- Sometimes consultants get busy and are not available to pass information to customers.
- Monitoring performance of consultants along the project is somewhat difficult;
- They is time gap in implementation of project;
- The usage of consultants is inconvenient because it creates dependence for some years to come on ICT specialists;

Expressed advantages of the use of foreign consultants according to order of priority:

- Businesses will have much larger pool of highly skilled professionals;
- And access to global market will be much facilitated.

Expressed disadvantages of the use of foreign consultants according to descending order:

- The salaries and wages of ICT professionals in foreign countries is much expensive;
- There is a cultural differences between the foreign consultant and the client company;

- Intellectual property rights of company is in jeopardy;
- The government's attitudes toward transborder data flows and trade in ICT services is another impediment.

One of the most significant problems with foreign consultants is the cultural difference. According to a technical coordinator:

> " The consultants weren't quite as nimble as we were because they hadn't been through this reengineering process and that caused an awful lot of conflicts, on both sides. It was a cultural difference".

The findings in this section show that ICTs are used only for few clerical activities and that it is the top management with little know-how and experience who makes decisions regarding ICT. Whether in the purchasing or hiring of consultants it is the management that has the final word; few times only are the actual experts involved. When outsourcing their activities, firms use different types of consultancy and have gained advantages and expressed some disadvantage. Detail analysis is provided in next chapter.

PART-II- Findings from the interviews

Previous section presented the use of ICT consultant by private sector in Addis Ababa. The following section presents opinion of consultants regarding their relation with private firms.

Survey results are presented under the following subtitles: company profile, ICT expert information, service information, organization information and major difficulties.

Out of the 34 planned interviews only 23 were possible to conduct. The rest 11-sample organization representatives were either very busy eventhough repeatedly requested, or not available at all. Out of the 23 interviews conducted only 13 (38.2%) were useable because information gathered from the other ten was either redundant or not useful for the presently undertaken study. The interview answers were coded accordingly.

a. Company profiles

The interviews were conducted with the chief information officers and in the other cases with persons directly involved in the consultancy service. These include the general manager, technical administrator, electrical engineers, system consultants and the ICT consultants.

The ICT consulting firms of the sample were local firms, which were initiated in most of cases because the ICT orientation of the society over the last few years.

Forty six percent (46.0%) of the interviewees said they entered the consultancy service because it was the current life style, another 38.5% saw an opportunity out of

it and the other 15.4% got into the business for other different reasons. For example a respondent said:

> "I was trained to be a system consultant; for years I tried to upgrade myself as a system consultant in organizations, but nothing there seemed to be to my satisfaction. I was eager to work as a consultant and share my knowledge. Then I went on my own and now I have my own consultancy firm dealing with the ICTs. It is my career." (System consultant)

Another noted:

> "We were a number of ICT professionals who just quitted a job because of several reasons or were looking for better opportunities. The opportunity of working as an ICT consultant among others availed itself thus we took the chance and here we are." (General manager)

The different ICT areas that these consultants engage in are:- software and hardware maintenance, development and coordination of ICT systems, installation of computer equipment, automation of business processes, development and design of new databases, customization and maintenance, network planning and installation, system analysis, application software design and implementation, development of a fully integrated system (hardware, software, networking), data center operation, data communication networks, support operations (equipment maintenance/service), disaster recovery, training and education, communication support of customers, data entry, back office clerical task, transaction processing, etc.

Besides their consulting service these firms provide sales, computer training, Internet access and e-mail services.

b. ICT expert information

From the total 13 respondents (38.2%) there are ICT experts who are at different education level. Ten had masters degree, 11 were diploma holders, 6 had Ph.D., 12 were high school graduates. The other ICT employees are either training certificate holders or people with experience in the field with some additional training.

An interviewee remarked when she was asked about her company's ICT consultant's education level.

> " We use consultants on contractual basis, most of them are master degree holders and receive further training by themselves. We are confident with our experts level of education because when we hire them for a single duty requiring specific qualification, for example if our customers need a new full accounting system to be built we search for ICT consultants who are literate or have some know-how in accounting. Then we hire them on contractual basis for that project. The same thing happens for other fields also." (General Manager)

These ICT experts, according to the interviewees have skills that are useful in the required field, are available at any necessary timetable, have good personal contacts, and good ways in handling customers. For example some have expressed their feelings as:

> " We get more strength out of an ICT consultant relationship if we are making it more a partnership, strategic relationship." (Information system manager)

> "As suppliers we have got to have an intense commitment to understanding our customer, what the customer's requirements are what the customer's drivers are. We have got to have this ability to sit as much as possible in the customer seat and understand the world from the customer's viewpoint." (Business support manager)

Interviewees were asked what training they offered for their ICT experts for the last two years. They said they have given training in windows common application software such as MS-Word, MS-Excel, MS-Access, Internet explorer, Eudora and other similar application software, system analysis and design, programming languages, application software, accounting Peachtree, visual C^{++} and related. In most cases consultants have to undergo their own training either by reading manuals or by attending certification courses.

c. Service information

The ICT consultants of the sample give services on contractual basis, on a one-time basis, and other means. Fifty three percent (53.8%) render their services on contractual basis whereas 7.7% render on a one-time basis, another 23% render their services either on contractual or timely basis. The remainders 15.5% are involved in

direct sale, training and equipment maintenance as customer's premises. A general manager said:

> "Usually users approach us with a given set conditions. They want a one-time agreement or in other cases they clearly state that they want the agreement to last for some years. Sometimes they want a continuous follow up on the ICT, their maintenance, upgrading and related matters."

In order to render their services either through a contract or a one-time basis, these ICT experts are approached by customers through different means. In 46.3% of the cases they are approached through tender bid that organization put out and through publicity and directory, 23% are contacted through tender bids only and 7.7% are contacted through publicity only. And the remainder 23.0% were approached through other means (through friends, by coincidence ... .)

> "Avery good friend of mine had a friend an acquaintance who wanted his accounting system to be developed so my friend gave him my coordinates." (Consultant)

When it comes to negotiating projects it is usually more than 50% of the cases the general manager who is responsible, 15.5% of the cases the steering committee is responsible whereas in the other 30.7% of the cases others like sales manager, deputy managers and technical and administrative managers are responsible.

ICT consultants are usually engaged in projects that are classified as follows. The minimum project contract level costing from as low as 1000 to 25 000birr, medium size projects from 50 000 to 500 000birr, bigger projects from 500 000 to 1 000 000birr and in other cases it goes beyond 100 000 000 birr. They sign contracts with most government offices, banks, major government projects, traders, manufacturers, different private organization, embassies, regional offices, road contractors, textile factories, construction offices, factories, food processors and distributors, petroleum enterprises, retail traders, and those in agro-industry.

After contract agreement, interviewees said that they have accomplished their work in most cases as per agreement without major complications. In other cases some percent of the work (10-25%) work was left undone because of some problems that arise from the consultants as well as the business side.

A respondent witnessed:

> "Sometimes the business holds up the work because of financial reason or may be because of change of manager who will look at things in different ways. In other cases the customer delays the implementation process. As the nature of ICT system is dynamic it will force the consultant to modify the study once again in order to cope up with the new enhancements". (Electrical engineer)

d. Organization Information

Interviewees were asked if they advertise their services and in such cases what were the means they used. They responded that they use media like television, radio and newspaper on average 8-10 times a year; brochures; by visiting potential customer; advertisement; personal contacts.

> "We used to advertise our services through newspapers which was not that much successful, thus we prepared brochures that we give away, distribute to offices whenever an occasion pops up, whenever we have the chance. Brochures are smaller and easier to keep and when an occasion occurs where services of consultants are needed." (Technical administrator)

Others say that:

> "We never had to advertise our services formally, it is through our personal contacts that our customers come to us. It is somewhat a way for them to ask a reduction or a favor from a friend's friend."

e. Major difficulties

Finally respondents were asked to state the major difficulties that they faced in performing their consultancy duties.

Expressed difficulties from the ICT consultants side according to descending order:

- Financial difficulties;

- It is difficult for them in estimating consultancy service fee;
- There are difficulties to call the various teams involved in a project for a meeting at one particular time and day ;
- In the case of training, the relevant personnel is not trained. Once trained there is no follow up upgrading with the fast changing world of technology;
- They don't have adequate experience to handle system development project;
- Lack of adequate project management skill;
- Not having precise methodology;
- Government does not enhance local consultants.

Some of the difficulties arise from the contracting institutions. Some of the key problems mentioned include:

- Customers are not flexible to accept new technology products;
- Lack of ICT appreciation and knowledge.
- No adequate information is provided from the business firms;
- Unavailability of personnel/ in-house staff that will guide the consultant on the business needs;
- There are often one brand oriented customers and sometimes it is difficult to convince them to use alternative solutions;
- Customers sometimes do not know what they really need;

- Biased opinion towards local and foreign consultants;
- Delay in making the initial decision;
- Lack of readiness to pay sufficient money for consultancy service;
- Absence of relevant feedback for the continuation of the next phase of the project;
- Due to lack of proper planning some of the customers system study and equipment lay idle in a store making it obsolete for implementation;

The last chapter summarizes survey result both from the business and ICT consultants perspective. The following chapter discusses the findings and interpretation in detail.

CHAPTER SEVEN
SURVEY ANALYSIS AND DISCUSSION

This chapter deals with the analysis and discussion of the findings. Analysis is performed according to the objective set and discussion is supported by literature. The chapter is divided into six parts that are:- ICT application in Addis Ababa businesses; current state and nature of ICT consulting firms in Addis Ababa; usage of ICT consultants by Addis Ababa businesses; factors that led to the use and non-use of ICT consulting; satisfaction level of businesses with ICT consulting services and problems faced by ICT consultants.

VII.1 ICT application in Addis Ababa businesses

It was observed from the findings that the senior managers have little experience or little knowledge of ICT. If the management does not have awareness on the potential and the benefits of ICT, it is obvious that it cannot contribute to the formulation of an effective ICT strategy. In fact, many of the decisions in the ICT area are based on 'gut feelings'. Thus, as witnessed by some respondents, the management often make decisions that have negative impact on the organization rather than benefiting it.

Organizations that spend a great amount of money on ICT equipment don't give much attention in the acquisition and development of ICT manpower. The ICT experts are not given regular training as new technologies are introduced. There is an understanding among the management that a one-time training is enough. Not enough importance is given for the update of the skills of the staff.

Eventhough computers were introduced in the country as early as 1960s, they are currently used in many organizations for secretarial and accounting services. Other areas like communication, inventory management, computer engineering design, networking, office automation have been given little attention. This shows that organizations have not yet appreciated the many uses of computers or have ignored them.

Many organizations have not recognized that ICT can be used as an effective tool to compete in business. They are not clear were they stand in regard to their competitors, haven't conducted any benchmarking to know what was their latest competitive position in the industry. Not knowing their competitors' ICT capability it is impossible for them to outpace their competitors through ICT and gain advantage.

The study classified the sample businesses of Addis Ababa into four categories according to their use and adoption of ICT. This classification is adopted from Dempsey (1999) who classifies business organizations into the ICT landscape as frozen in the past, in the abyss, competitive and leading.

(a) The first category containing 31% of the sample represents those organizations that haven't given a chance for ICT to develop and integrate their business. Their history in ICT spending is very low and inconsistent. Because of their reluctance to spend on ICT they usually have the early forms of the technology, which are slow to respond to the rapid business changes of the era. As with wood that is been eaten by termites the troubles facing companies of this kind aren't obvious from the outside. Their systems may work well but when stress is applied their problems become only too apparent, they are frozen in the past.

(b) The second containing 44% of the sample represent organizations that are spending more and more on ICT but are gaining very little from their investment. Their ICT budget is greatly dominated by operations and maintenance spending, with little left over for new development. They make use of technology but not effectively, yet longer roads await them, they are stuck in the abyss some struggling to force out.

(c) The third category (18% of the sample) represents those organizations that have made effective use of their ICT in their business and gained competitive advantage. Spending in ICT is under control, application portfolios are up to date and there is effective new development. According to the findings, some of these organizations were found to be fully dependent on ICTs. Though contradictory it may seem compared to what was previously said, further analysis showed that these fully dependent organizations were those that use ICTs in their daily activities. These include the banking, insurance, tour and travel agents and some manufacturers. Each and every activity of their offices is done through ICT technologies. For example in the travel agents office where all the activities are done through computer terminals and telephones, if any kind of problem occurs the system can't run, reservation can't be made and contact with abroad is impossible.

(d) The last category represents those organizations that are using ICT for competitive advantage, they use it to support their business value. This implies that they can give their customers easier access to systems and information improving product design, bringing new products to market earlier, and integrating systems more rapidly, etc. They are distinguished by their flexible technology infrastructure. These companies however represent only 6% of the sample organization.

In overall figure, ICT decisions are made frequently with an imperfect or incomplete understanding of the value an investment will bring. Equipment is being acquired with little coordination and planning. It was observed that many organizations face difficulties to use even the simplest features of the equipment and often have been facing obstacles in coping up with the need for constant changes in skill development. Assistance in such cases can be rendered by consultants, but it is only 37% of the sample cases that call upon outside help the rest 63% try to solve their problems with in-house staff or try to put aside the technology until some solution is found.

VII.2 Current state and nature of ICT consulting firms in Addis Ababa

Over 46% of the ICT consultants entered the profession because it was the current life style (they followed the 'fashion' of the time) and other 38.5% saw an opportunity out of it. Few of them were trained to be consultants.

In the process of their service giving, ICT consultants do not have standards to follow. Published standards such as the internationally renown ISO 9000 series that describes a set of requirement for any company's system could have been used for certification process. The absence of this certification process contributes to the low quality of consultants in the field.

But the absence of standard on the other hand hasn't halted the service giving process of these experts. The different ICT areas they perform their expertise in are:-

- Software and hardware maintenance;
- Development and coordination of ICT systems;
- Installation of computer equipment;
- Automation of business processes;
- Development and design of new databases;
- Customization and maintenance;
- Network planning and installation;
- System analysis;
- Application software design and implementation;
- Development of a fully integrated system;
- Training and education;
- Advise on hardware and software purchase, etc.

Even if the consultants claim to give the above listed services, they are not properly skilled in the ICT field. They are often holders of bachelor and master's degree in subjects like agriculture, economics, and accounting and have entered the consulting service by experience and self-training. They don't have enough exposure in the

field, they have engaged themselves in only few contracts. Their service giving mostly focuses on maintenance and support of ICTs.

When rendering their services these consultants provide either a contractual service or a one-time basis, eventhough long consulting contracts are more common. But history shows that long-term contracts have turned out inflexible in the face of business volatility and rapid technological changes. (Kern, Willcocks 1999). Sometimes consultants are required to perform jobs that are beyond the boundaries of their contract. There is actually no performance measure against which the consultant can be monitored regularly or can be penalized on. Consultants are free to finish their work when they feel like it. This implies that work isn't done seriously.

In marketing their services ICT consultants often advertise on average 8-10 times a year through newspapers, television and radio. Since there is no formal registry prepared for consultants to advertise their services it is difficult for business organizations to contact them.

VII.3 Usage of ICT consultants by businesses in Addis Ababa

It was noted that organizations make use of two type of consultants 55% use local consultants whereas 45% use foreign consultants. Those who use foreign consultants

said that they believe that foreign consultants have better training and know-how. They believe that foreign consultants do their job better than local ones.

Some foreign consultants provide training and site visits abroad. As a result decision-making body use them for their own individual motives anticipating the baggage that comes with it as a special benefit which in fact costs their organization a lot.

Starting at the point where the business case for outsourcing has been established and agreed by management in the client company, the next stage was selection of consultant. Several methods such as advertising, recommendations, invitation to tender, friends and acquaintances are used in order to select ICT consultants. In their invitation to tender (ITT) organizations request information like:- specifications for the work required under the contract to be entered; duration of contract; the number and technical qualifications of the staff they propose to engage for each schedule which they are bidding for; contract price for each year , each schedule to be performed; their office conditions and criteria etc. In this method several consultants would present in their bids and will continue. This process could be used to eliminate vendors but it was clear, even where a formal evaluation process was undertaken, that this was essentially not the real decision making process. At most it

served as a background to the decision. The real selection was based on other factors. These factors are more difficult to evaluate and cannot be easily quantified.

Cost reduction is one of the factors that is seen as a major point in the evaluation criteria in 25% of the cases. But cost is not the whole story, even when it is projected over the entire life of an investment cost doesn't entail good service. Previous research has shown that selecting the lowest bid can incur risks of deteriorating service and opportunistic behavior (Lacity and Willcocks 1999). No single company had a standard to follow in the evaluation and selection of consultants. They mostly concentrated on cost reduction.

In other 18.7% of the sample organization criteria that were seen as important were the consultant's previous experience in the relevant area and his success, and his will to participate in the management of the ICT functions that are consulted. In 12.5% of the cases consultants were requested to present information depending on the organization's need and if they fulfill the needs they are selected. In the rest 43.8% of cases consultants were selected because they had similar way of business thinking and work practices, and believed to add values to the existing in-house capabilities and skills.

The ICT functions that business organization outsource are development of a fully integrated system (hardware, software and networking) data communication networks, support and maintenance service, data entry, back office clerical tasks, training and education, disaster recovery, transaction recovery etc.

It was remarked that 40% of Addis Ababa sample organizations make use of total outsourcing. They give out all ICT functions to be performed by a single ICT consultant. In here the client and the consultant sign contracts usually for 5 to 10 years, but this long-term contract will open the way for problems to rise through the years. These include, as experience showed (Currie 1998) increasing ICT costs and poor service levels due to ill-defined relational contract and inflexibility in adapting to both business and technical changes, loss of alignment between business strategy and ICT, failed promises to access new technology etc. And when the contracts run into difficulties it is difficult to bring back ICT in-house.

A small percent (8%) make use of multiple consultants. This is a strategy that intends to create an alliance of consultants who compete with each other for business with the client, and thus interdependency between the client and consultant is reduced. In here, management is able to concentrate on its core business activities. Agreement with multiple consultants allows the flexibility to use best breed expertise and to maintain some element of competition. Although multiple

outsourcing was adopted to avoid the inevitable risks of using only one consultant, some companies had experienced difficulties in managing and coordinating different consultants at a time.

In 30% of the cases organizations sign a joint venture alliance with the consultant on a shared risk/reward basis. This type of outsourcing reduces risk of single supplier or multiple consultants outsourcing contracts. The organizations gain access to specialist managerial and technical skills, which it may not have in-house.

Another 21% made use of selective outsourcing. This practice chooses certain ICT functions for outsourcing and retains other ICT applications in-house. This type of outsourcing is relatively low risk as the client organization carefully selects one or several ICT consultants but for specific, discrete contracts. But while selective outsourcing provides managers with a greater array of options, it is also more confusing, managers may make the wrong decisions about which ICT services to outsource and which services to retain in-house and neglect the technical issues involved in outsourcing and miscalculate the long-term economic consequences.

VII.4 Factors that led to the use of ICT consulting services

Generally, many of the sample businesses go out for help when not satisfied with in-house services. Their staffs usually don't know how to handle the technology, which one to use for specific activities and thus the organization is trapped in the technology that will force it to go out for help.

In other cases, they are driven to outsourcing primarily by cash flow problems and cost consideration. They either needed to move from a fixed to a variable cost base, or a desire to constrain the cost of a stable and non-core commodity function.

Yet others, saw effective exploitation of ICT as strategic to their business. In this case the emphasis was upon a major change in culture and working practices, to move aggressively to newer technology and to exploit information systems more effectively in a changing business environment. They also perceived an opportunity to develop new areas of business through a relationship with an ICT consultant. These are the organizations that saw ICT consulting as a positive reward.

Thus, the predominant drivers for outsourcing are financial core competencies, business, flexibility need for better efficiency, cost containment and a reduced need to hire ICT professionals, an improved ability to focus on the strategic use of ICT, and absence of expert in their organizations.

VII.5 Satisfaction level of businesses with ICT consulting services

Present research findings show that the business firms of Addis Ababa that have not made use of any kind of ICT consulting services lag in their business activities behind those who have actually made use of it and gained advantage. They are either spending very little on ICT or not giving it a strategic value or have spent a lot on ICT without being able to control it. The firms that actually do not use consulting service believe they are competent enough to deal with all ICT problems, they don't rely on consultants. They believe ICT is not as such a strategic weapon that needs care and regular follow up by experts in the field. These companies are mostly located in the ICT landscape that we called earlier 'frozen in the past' and in the abyss and they account for 75% of those involved in the research. This shows that this majority lack awareness of ICT use and management that would have been advantageous to their business. Without the awareness of ICT's value to business it will be difficult to think of outsourcing ICT functions or call upon ICT consultants.

On the other hand, the study showed that business firms that made use of ICT consulting services have gained some advantages but have as well faced some inconveniences. Respondents said that the introduction of ICT expertise have helped them in reducing their cost on unnecessary ICT. Thanks to the advise of the experts they were able to spend wisely and have access to leading edge technology. They

developed the company's know-how in ICT and gained new ideas. Their company was updated in timely and accurate ICT.

Outsourcing their ICT functions has helped them to gain time to focus on the strategic use of ICT, focus on the core business activity. By solving their problems, giving support services, the use of consulting service has facilitated their business. Those that have made use of foreign consultants said they had access to a much larger pool of highly skilled professionals and access to global market.

But as great as advantages of consulting service may be, there are certain disadvantages that are attached to it, said respondents. Explaining exact needs to consultants was seen as one of the major problems. It was difficult to express what the business organizations needed to the detail. This will lead to wrong assumptions that will result in unsatisfactory result to the client at the end of the job since not knowing exactly what is expected from him the consultant performs according to his feelings not based on the need of the client.

After the engagement of consultants monitoring performance was seen as difficult. This was so because of behavior of consultants and lack of time and personnel. The other contributor to this is the absence of a clear timetable and guideline that would have help in a regular follow up of the consultant's work.

Another problem is when organizations give out almost all their ICT functions to consultants. Depending totally on consultants' job, such organizations were not able to control the integrity of company's secrets and intellectual property. This is because the consultant had to have every piece of information that he needed in the performance of his total consultancy work.

After the development of a system, implementation was usually time consuming. Some consultants are engaged at a single time, in many places or sign many contracts and promise work to be finished at a specific time whereas thus get busy running here and there, that they are not available to pass information to customers and they neglect their work. Those that have called upon foreign consultants said that the major problem is the cultural difference between the client company and the consultant. Communication is usually difficult because client can not express freely what they really want.

VII.6 Problems faced by ICT consultants

Like any other profession ICT consultancy is not free of problems. Respondents have expressed their opinions on the difficulties that they face when rendering their services by stating that these problems arise not only from the customer's side but their side too.

They often face financial difficulties. One reason is due to their poor financial status and little experience in the field, it is usually difficult for them to estimate consultancy service fee. Hence the price they request for the service is either too much, in which case they won't win the bid, or too small, in which case they loose money in performing the job even if they win the bid.

Once a contract is signed and the work begins, building a team for the consulting service is difficult. For this reason many fail to start the service or meet their schedule.

Some of the interviewees have even gone further and have admitted that they lack regular skills upgrade to their personnel; they lack adequate project management skills; do not have precise methodology to follow in their work, and that they don't have experience to handle system development project.

On the other hand, consultants said that they face difficulties arising from the contracting institutions. Most of all, customers were not flexible to accept new technology products; because they are often one brand-oriented it is difficult and sometimes impossible to convince them to choose alternatives.

Even engaged in the outsourcing process, business firms do not provide adequate information to consultants to work on. This is because firms sometimes do not know what they need.

Not having sufficient information about consultancy service provided here in the city or may be neglecting it, the business firms opt for the use of foreign consultants. They have biased opinion about these consultants, they believe that foreign consultants do the job better than the domestic one, they believe that they will gain much more by using the foreign consultants. This tendency to foreign consultants has impeded growth of local capacity.

The following chapter provides general conclusion of the findings of the study and forward some recommendations as to how to alleviate some of the problems facing ICT consultancy in Addis Ababa.

CHAPTER EIGHT
CONCLUSION AND RECOMMENDATIONS

The ultimate objective of this research was to investigate the use of ICT consulting services by Addis Ababa business entrepreneurs, and look at the current state and nature of ICT consultants. Findings were analyzed in the previous chapter and conclusions are drawn in this chapter along recommendations that are forwarded for improving the situation of consultancy trend in Addis Ababa. The recommendations are presented here for ameliorating the situation of consultancy in information and communication technologies in Addis Ababa. Research finding shows that three stakeholders are involved in the development of information and communication technology and affect consultancy services in this area: These include: policy makers, business firms that use the services and the ICT consultancy firms. Research recommendation is thus divided into three sections.

(i) Policy makers

It was found that government does not only uses consultancy services but also influences the development of ICT consultancy in Ethiopia. Policy makers in government and business institutions make decision on which ICT equipment to buy and which consultant to engage. Major findings of the study show that most of

these decision makers have limited understanding of the technology and the ways it integrates with business. It is thus critical to:

- Increase awareness of policy makers in the implication of information and communication technology to business environment
- Create study tours to local institutions that have successfully implemented information and communication technology to improve business process
- Increase the understanding of policy makers on the implications of information and communication technology consultancy to national development.

In the long term there is a need to improve the capacity of business schools to train not only ICT but also its impact on organizations and business process. It is thus recommended that students in management should be given courses in Management Information Systems course emphasizing management, systems analysis and design, information and communication technology management from the business perspective.

These courses would cover information system and business value of ICT; an introduction to the different kinds of technologies hardware, software, communication technology, data management, quality assurance and ICT evaluation, etc. They should also cover organization and management of information and communication technologies such as structuring of ICT function, managing ICT

staff, managing resources and managing end-user computing. Students should also gain knowledge on corporate planning, ICT planning, automated support for planning and strategic alignment; role of ICT in business organization, ICT outsourcing, alliances and internationalization; skills, training, culture, cross functional and inter-organizational issues, business process redesign and organization learning.

It was also observed that the current ICT consultancy does not have a minimum set of guidelines and business procedures. ICT consultancy is provided on ad- hoc and personal network basis as opposed to standardized business practice. A professional code of ethics is not in place. Lack of a minimum set of rules, guidelines and professional ethics is the major obstacle to the selection, evaluation and use of ICT consultants.

Both client and the consultant could benefit a lot from the availability of a minimum set of rules, guidelines and code of ethics. A good code of ethics and competitive environment would benefit the client to receive fair business dealing. Consultants could also benefit from code of ethics: in return for the faith that the public places in them, they accept certain obligation to behave in ways that are beneficial to the public. Thus it is essential to establish a code of ethics and minimum set of rules for information technology consultancy. Policy makers have a considerable role in

promoting business and consultants association, information technology associations that develop their own codes of ethics.

Minimum guidelines in the use and engagement of consultancy should be developed by policy makers. One finding of the study is that there is no standard format and guidelines for writing Request for Proposal (RFPs). The majority of the invitations to tender are difficult to participate in. Public institutions and policy makers such as the Science and Technology Commission should assist in the development of a formal guideline in developing request for proposals.

Lack of adequate guidelines in selecting and evaluating consultant is another obstacle facing information and communication technology applications in Addis Ababa. Policy makers should play a substantial role in developing sets of guidelines for evaluation of consultants.

b) Business firms

The study found that the majority of the business firms in Addis Ababa do not have formal information and communication technology departments. The creation or presence of an ICT department solely responsible for activities related to ICT function will benefit the organization. This would relieve the top management and

other departments to focus on their core business activity. The ICT department staff would be in a good position to develop and demonstrate ICT that could be used to improve the business process. If adequately and properly used ICTs provide a competitive advantage for the companies.

Study has also revealed that there is inadequacy in deciding what to outsource or not. Prior to outsourcing, the top management should evaluate its alternatives. It should first see if in-house staff could perform the jobs required; and if not then the next step will be to decide on what services should be outsourced. Deciding on what to outsource first could cut costs. It could also help the company to keep mission critical applications and to protect the privacy and intellectual property of the firm.

The study also revealed that a great number of firms prefer the services of foreign consultants. Services rendered by local consultants were seen as substandard. However the study did not find much difference in the level of services between local and foreign consultants. Giving chances to the local consultants will benefit the private companies because they are more accessible; communication with local consultants will be faster. Local consultants understand the business culture of the Addis Ababa businessmen, they know the behavior and attitude of the Addis Ababa the local firms, most of all they save the hard-earned foreign currency.

However, it is possible that some jobs may require special expertise that cannot be available locally. In such cases joint ventures between local and foreign consultants should be encouraged. This would help the client to get a reliable support service from the local consultant after the development work is completed and the foreign consultant departs for home.

c) Consultants

Research showed that Addis Ababa ICT consultants concentrate in their services giving on support/maintenance and neglect other areas such as software development for both local and foreign use, system analysis and development, networking, automation of business processes, etc. They usually give more attention to the sales of hardware, software, computer equipment, giving training and education, etc. This will contributed to the low growth of the profession in the country, thus consultants need to shift their attention and concentrate on those sections that will be both beneficial to businesses as well to them and their profession.

The key finding regarding the consultancy firms is the lack of confidence of the majority of staff working in these firms. In performing a consulting job, a one time formal education is generally insufficient. To keep abreast of new concepts and

techniques, consultants must upgrade and update their staff through additional courses regularly. In addition, consultant should supplement their learning through such venues as self-directed study, professional development programs, conferences, and on the job training. Consultants should invest time and money to update themselves to the rapidly changing technology.

As the field of consultancy is not yet well developed in the country, there is awareness problem among the public at large. There is limited understanding on "who can do what" in the information and communication technology field in Addis Ababa. ICT consultants should market their services.

Some of the methods of self-marketing which are not practiced by local consultants include joining both job related and civic organizations, attend conventions, serving on committees and speak at meetings. All these will increase their visibility and make them well known as experts in their field and attract new clients. Achieving publicity, through press releases, published articles, media interviews, and public speaking, can be more powerful than passive advertising, because it builds their professional image in a real-world context and is not a financial drain. The public can be further acquainted to the field by information such as announcement and large coverage of new products the consultants have developed or for which they are

distributors or an agents; a new service they offer; a major contract award from a prominent local company or government agency; success stories, etc.

Another finding of the study is that there is limited communication between consultant and client when after and prior to job offering. It is possible to use online techniques such as mailing lists and the World Wide Web to interact on regular basis. Consulting firms should also use the WWW and print media as a marketing tool. For example the WWW page can be designed to disseminate expertise of the local consultant and provide information on ongoing activities being undertaken by various firms in the country. A prototype page has been designed using FrontPage software to show how information could be disseminated using the WWW. Figure-8.1- shows the home page of the prototype. The page would include databases on the location or expertise and services of the ICT consultants; news flash; section available for businesses to communicate their desire and links to the other information sources.

Figure-8.2- shows a prototype page that provides information on ICT consulting in general and specific to Ethiopia.

A page for ICT consultants would be included having a list of these experts with their respective links as shown in the prototype of figure-8.3-.

Individual pages can also be designed for each consultancy firms. Figure-8.4- provides a prototype for Allied Teletronics Engineers Plc, a company specializing in supply, maintenance and consulting of power and communication equipment. (a full coverage of the whole page designed can be found at the following site www.ethiolink.com/kidist.

The prototype has been discussed with a number of private firms in Addis Ababa and a number of comments have been received that have already been integrated in the design. It was noted that use of the WWW will facilitate the activities of local consultancy firms and will act as the key dissemination tool for their services.

Further area of research

- This research was undertaken as preliminary insight to the ICT consultancy in Addis Ababa. The time provided by the study to this wider issue was limited. The findings highlighted avenues for further research for example an in-depth analysis is needed to investigate success and failure of contract agreement and management of outsourcing relations. It will also be valuable to revisit the organizations in a few years time after the implementation of the recommended points above.

- It will also be valuable to conduct similar study but concentrating on the informal sector as it is the sector that is growing much rapidly and that it includes much of the population of Addis Ababa.

- The present research covered all formal business areas of Addis Ababa but did not concentrated on one particular business activity. So further research could be done by focusing on one type of business, for example investigating the ICT consulting service use trend of manufacturers or exporters or importers.

ANNEX-1-

CONTEXTUAL DEFINITIONS

Consultant:

A consultant is an individual qualified by education, experience, technical ability and temperament to advise or assist on a professional basis in identifying, defining and solving specific problems involving the organization, planning, direction, control and operation of a system. The consultant serves the system as an impartial, objective advisor, and is not an employee of that organization. (Microsoft Encarta, 1994)

ICT consulting:

ICT consulting is an independent professional advisory service contracted for and provided to organizations by specially trained and qualified persons who assist, in an objective and independent manner, the client organization to identify ICT management problems, analyze such problems, recommend solutions to these problems, and help, when requested, in the implementation of solutions. (Kubr, 1996)

Entrepreneur:

An entrepreneur is the one who organizes, manages, and assumes the risks of business or enterprise; an entrepreneur undertakes or assumes business responsibilities and tasks for creating and developing new living business rather than burying old dead ones.(Martin, 1994)

Outsourcing of ICT:

Outsourcing of ICT means selectively turning over to a vendor some or all of the IS (information systems) functions, ranging from simple data entry to software development and maintenance, data center operations and full system integration. Outsourcing is the delegation to a third party of the continuous management responsibility for the provision of an ICT service under a contract that includes a service level agreement. (Encyclopaedia Britannica, 1997).

ANNEX-2-

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
SCHOOL OF INFORMATION STUDIES FOR AFRICA

QUESTIONNAIRE

The following questionnaire is designed to gather information about "Information and Communication Technologies" (ICT) Consulting by Addis Ababa business firms. The questionnaire is divided into two parts that are: Part I. Company Data and Part II. The Use of ICT consultancy.
We would appreciate your careful and candid answer. All information that you provide will be treated confidentially.
Thank you for taking your time to fill out the questionnaire.
(Note: *Information and Communication Technologies will be referred to as* **"ICT"** *throughout the questionnaire.)*

PART I: COMPANY DATA

In this part of the questionnaire we would like you to provide some brief details about yourself and your organization.

1. Respondent information.

Name of organization:	
Position in the organization:	
Professional qualification:	Degree or Diploma:
Years of experience:	
Address:	
Phone:	Fax:
E-mail:	P.O.Box:

2. When was your company established?
_____

3. What is the principal ownership of your company?
☐ Local office ☐ Satellite office (representation)

4. Is your business unit generally considered to be a? (tick where appropriate)
☐ Group ☐ Division or subsidiary
☐ Independent company ☐ Other (please specify)
_____

5. What kind of business activity is your company involved in?
☐ Export ☐ Import ☐ Agency ☐ Manufacturing
☐ Service ☐ More than one

6. What is the main activity of your business (in what do you specialize)?
_____
_____

7. Approximately how many people does your company employ?
☐ Permanent _____ ☐ Contract _____

8. How many departments does your company have? _____What are they (please enumerate)?
➢ _____ ➢ _____

- _____
- _____
- _____
- _____

9. What is the educational level of your ICT experts/employees?

Education level	Number of employees	Years of experience
Phd		
Master degree		
Postgraduate diploma		
Bachelor's degree		
Diploma certificate		
High school		
Other (please specify) _____		

10. Which of the following technologies does your company make use of ?
    - ☐ Telephone (both office and mobile)
    - ☐ Facsimile
    - ☐ Computers
    - ☐ Internet service
    - ☐ Other (please specify) _____

11. For which kind of activities do you employ your ICTs? _____

12. To what extent do you depend on these technologies on your day to day activities (use the rating system).
    ☐ Fully ☐ Moderately ☐ Not dependent

13. Where would you locate your company in the ICT landscape:
    - ☐ Not yet fully developed in the ICT industry
    - ☐ Keeping up to date but facing some major problems
    - ☐ Keeping up to date and competitive
    - ☐ Keeping up to date and ahead of all

Part II: The Use of ICT Consultancy

A. Outsourcing Decision

1. What measures do you take when you have problems with your ICT industry?:
    ☐ Management handles it ☐Information department handles it

☐ Outside help is requested ☐Other (please specify)

_____

2. To what extent are you satisfied with the results you get from the in-house services:
☐ Fully ☐ Partly ☐ Moderately ☐ Not at all ☐ Other (please specify)

_____

3. Do you currently make use of ICT consultants or have you contracted to do so in the near future?
☐ Yes ☐ No

4. What type of ICT consultants do you use?
☐ Domestic ☐ Foreign ☐ Both

5. If you choose foreign ICT consultants, why did you do so?

_____

_____

_____

6. Are you aware of the duties of an ICT consultant? ☐ Yes ☐ No

7. In general why does you organization decide to use outside ICT experts?

_____

_____

_____

8. Whose **initial idea** was it to explore the possibility of outsourcing ?
☐ General Manager ☐ Information Department Head ☐ Steering Committee
☐ Other (please specify)

_____

9. Who is **responsibility** in taking the final decision about using ICT consultants?
☐ General Manager ☐Information Department Head ☐ Steering Committee
☐ Other (please specify)

_____

10. Please tick as appropriate any or all of the following list of specific ICT functions you currently give on a contract basis for ICT consultants.

ICT functions	Yes	No
Development of a fully integrated system that includes hardware, software, and networking	☐	☐
Data communication networks	☐	☐
Support operations (equipment maintenance/ service)	☐	☐
Disaster recovery	☐	☐
Training and education	☐	☐
Telephone support	☐	☐
Data entry	☐	☐
Back office clerical tasks	☐	☐
Other (please specify)	☐	☐

11. Have you ever made use of ICT consultants **in the past**?

☐ Yes, please specify the names of the companies whose ICT consultancy service you used.

_____

_____

_____

☐ No

12. If you used ICT consultants in the past, have you ever evaluated their performance?
☐ Yes, what are the criteria you used? _____

_____

_____

_____

☐ No

13. What type of ICT consulting do you use?
☐ Give out all ICT functions to be performed by a single ICT consultant
☐ Give out different ICT functions for more than one consultant
☐ Give out selected ICT functions to a discrete number of appropriate consultants
☐ Your organization enters into a long-term partnership with another company that will perform all his ICT functions
☐ In-house consulting
☐ A mix of the above
☐ Other (please specify)_____

14. On average what is the duration of a contract that you sign with a vendor ?
☐ less than six months ☐ six months ☐ a year ☐ 3-5 years
☐ 10 years or above ☐ Other (please specify)
_____

B. Selection of Consultants

15. When choosing consultants what is the first step that you make?
☐ Invitation to tender ☐ Advertise for vendors
☐ Other (please specify)
_____

16. What kind of format do you follow when writing the invitation to tender?
☐ The company's format ☐ According to need ☐ Other (please specify)_____

17. What are the general things that are included in you tender?
_____

_____

_____

_____

_____

18. Who is responsible in opening and evaluating tenders?

_____

19. According to what criteria do you perform evaluation and selection of consultants (tick as appropriate)

Criteria for evaluation and selection of consultants	Yes	No
Request for information from consultants	☐	☐
Similar way of business thinking and work practices	☐	☐
Consultants participating in the management of activities that are consulted	☐	☐
Adding values to the existing in-house capabilities and skills	☐	☐
Consultant that has previous experience in the relevant area and has proved itself in some way	☐	☐
Cost reducing	☐	☐
Do you have a standard to follow (please specify) _____	☐	☐
Other (please specify) _____	☐	☐

20. On average, after selection of consultants, within what time gap does the actual work begin?

_____

_____

18. Does the consultant keep up his end of the bargain until the end?
☐ Never ☐Sometimes ☐ Mostly ☐ Always

C. Advantages and disadvantages

19. Please list down the advantages and disadvantages that you believe have implications from you r ICT consultancy use.

Advantages **Disadvantages**

Thank You For Your Cooperation!!

ANNEX -3-
INTERVIEW OUTLINE

1. Respondent information: professional qualification and position in the organization.
2. When was your company first established?
3. What is the principal ownership of your company?
4. How did you get into the business of ICT consulting in the first place?
5. What is the main activity of your business (in what do you specialize)?
6. Approximately how many people does your company employ?
7. What is the educational level of your ICT experts/employees?
8. What are the training that have been offered for you ICT personnel for the last two years?
9. What type of service do you give?
10. How were you approached in most cases, in order to render your services?
11. Who is responsible in negotiating projects?
12. Please cite some business firms among those to whom you have given ICT consulting service.
13. Do you have a written guideline to follow in your project planning?
14. Through what means and how often do you advertise your services to the public?
15. What are the major difficulties you face in performing your consultancy duties?

ANNEX-4-
List Of Persons Who Have Contributed To This Work

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    Department of Information Systems and Computing. Professor of strategic Information Systems. Brunel University, UK. Wendy.currie@brunel.ac.uk.

ANNEX -5 -
LIST OF INTERVIEWEES

1. Acp_Seric Plc
2. Alcatel
3. Allied Teletronics Engineers Plc
4. AltaComputec
5. CBC (City Business Computer)
6. Computer Professionals United Plc
7. Computer Solutions Plc
8. Das Computer Engineering Plc
9. Datacom
10. Elecro-Commercials Share Company
11. Ernst & Young
12. Excel Information Technology Plc
13. Gellatly Hankey Company- Information technology
14. Habesha Agency Interactive Center
15. IZATCO-UNISYS
16. MKTY Information Technology
17. NCR Corporation
18. NEC Corporation
19. Router Computer Engineering Plc
20. Siltun Balemuya Co. SBACO
21. Solo-Systems
22. TSD Engineering Plc
23. Vision Computer

ANNEX -6 -
LIST OF BUISNESS FIRMS

EXPORT

1. Abbay impex Plc.
2. Axis-International .
3. Cabey Plc.
4. Commodity trading Enterprise.
5. DMS trading.
6. Ethiopian grain trade enterprise.
7. Gobani brothers Plc.
8. HAICOF Ltd.
9. S-Habeshi international trading enterprise.

IMPORT

1. ABC trading.
2. Addis Fire protection equipment.
3. Adulis auto spare parts.
4. Ageca (Ethiopia) Co. Plc
5. Consolidated manufacturing and trading enterprises.
6. Electrofix.
7. Emperio-Dellauto plc.
8. Hagbes Plc.
9. Hayat sewing machinery and parts.
10. Inter Alpha trade enterprises Plc.
11. M. G. R. Plc
12. Majic electronics.
13. Majic Plc.
14. National sports house.
15. New century agency auto spare.
16. Nile construction Plc.
17. Ric auto plc.
18. Ries Engineering Share Co.
19. Samuel Deressa pharmaceutical importers
20. Super tronics.
21. Tewfik Sherif and co. Ltd.
22. Unity auto mercantile
23. Venus international trading.
24. Wugagen electrical engineers.

AGENCY

1. A/Z trading service Plc.
2. AAS International.
3. ABDOSH International trading co.
4. Abebe Aklog Impex.
5. **Adanech Assefa Business center.**
6. Ellis trading.
7. Green Line Plc.
8. Miask International Plc.
9. Samjo International Plc.
10. UNIBROS Plc.
11. Waryt International.
12. Wass development enterprise.

MANUFACTURIING

1. Automotive manufacturing co. Ethiopia (AMCE).
2. CSI Ethiopia.
3. Data Rapid Sole and Shoes Factory.
4. Finfine Furniture Factory.
5. Genuine Leather Craft Plc.
6. GM Office Furniture Manufactures.
7. Modern Building Industry.
8. Peacock trading
9. Processing of Poly industrial chemical.
10. United metal works factory.

SERVICE

1. ABC Printing Press.
2. Addis Ababa Hilton international.
3. Ararat Hotel.
4. Afro Asia Technical trading International.
5. Attco Access Trade and travel Co. Ltd.
6. Bahar Dar tour and travel co. Ltd.
7. Bank of Abyssinia.
8. Blue Nile construction enterprises.
9. Construction and Business Bank.
10. Ethio graphic Plc.
11. Ethiopian shipping lines.
12. Fana travel and tours.
13. High Profile.
14. Lalibela travel and tour agency.
15. Midroc Ethiopia.
16. Mirame Plc.
17. Sheraton Addis.
18. Tambek International Plc.
19. Tsega Asamere and families Plc.
20. Yoseph Asrat construction equipment rental.

MORE THAN BUSINESS ACTIVITY

1. A. Meucci Plc.
2. Abyssinia trading Plc.
3. Addis Asqual transit and trading Plc.
4. Afcor Ethiopia.
5. Afework international group Plc.
6. Afro Ostrich int'l pl.
7. Alfarag trading plc.
8. Almeta Impex Plc.
9. Amare Afework Import and export.
10. Angereb enterprise.
11. Ayenew-Degu Mersa Tannery.
12. Beyokaraba Plc.
13. Beza International.
14. Cos trading and technical Plc.
15. Country trading Plc.
16. Daylight Engineering Plc.
17. Doba industrial trading Plc.
18. East African Business contacts
19. Egmak technical trading Plc.
20. Electric world Plc.
21. Electrolux import and export.
22. Elmiolindo contractors Plc.
23. Equatorial business group.
24. Ethio Automotive and general trading Plc.
25. Ethio-Trade Export co. PLtd.
26. Gaky Engineering Automotive Plc.
27. Garad trading enterprise.
28. Get-As International Plc.
29. Ghion industrial and commercial Plc.
30. Gift trading co. Plc.
31. Glorious Int'l trading enterprise.
32. Hermes Plc.
33. Jukerose Ethiopia Plc.
34. Kadisco Chemical industry Plc.
35. Kana Import-export Private enterprise
36. Kojo International co.
37. Kurtu International Plc.
38. Lions international trading Plc.
39. M&M trans Africa trading Plc.
40. MA Thermo Plastic and Melamine Industry.
41. Mag Int'l.
42. Meskel Flowers Plc.
43. Moab Plc.
44. Mohammed Yimer and Sons Plc.
45. Mulu Electro engineering Plc.
46. National engineers
47. Ne-Tse Plc.
48. Nyala Motors Share Co.
49. Omedad Plc.
50. Orbit techno-commercial
51. PACktra Plc.
52. Petram Co. Ltd.
53. Progress trading Plc.
54. Sacif Plc.
55. Sets general trading Plc.
56. Shala International Plc.
57. Shi Solomon Hailu Supermarket Plc.
58. Siemens Pvt. Ltd Co.
59. Star Business group.
60. Sunlight industrial and distribution co. (SIDCO).
61. TA International.
62. Taneitco International trading Plc.
63. Telco Plc.
64. Telrad Ethiopia
65. Transport consult international.
66. Trnaco Plc.
67. Ture Import Export Plc.
68. TYO trading enterprise
69. Unibros Plc.
70. United Developers Plc.
71. Wabe enterprise Plc.
72. Wondi trading.
73. Yamato Ethiopia.
74. Yirga trading Plc.
75. Yumo international agency.
76. Zaff Enterprise Co.Ltd.

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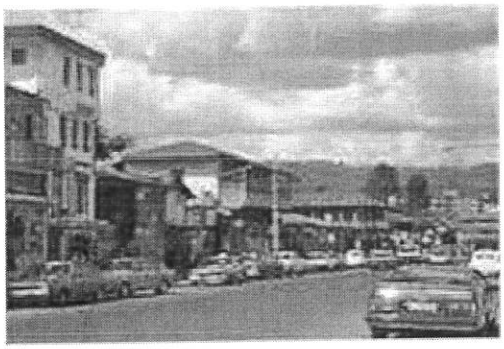
ICT CONSULTING SERVICES  IN ADDIS ABABA

This site allows you to navigate through the world of information and communication technology consulting service. It will enable you to follow up with the technology as well give you hint where to get profesional help. It guides you through the ICT consulting profession here in ADDIS ABABA, the capital city of Ethiopia.



 ICT Consulting

 ICT Consultants

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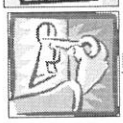 Exit

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ICT CONSULTING

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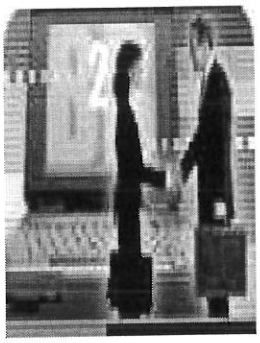

WHAT IS ICT CONSULTING?

Many business organizations were stuck with outdated equipment, others had ICT experts that couldn't cope up with the fast growing field, and yet others could not concentrate on their core business activity because they had to catch up with the new technologies. Companies had to retain the capacity to regularly adjust their positioning in each area; and sometimes radically change their chosen business strategies, ICT platforms, or arrangements for delivering services. Many engaged management consultants to deal with these strategic issues. Management consultants now specialize in ICT consulting among others. ICT consulting is defined by many experts as:-

"An independent professional advisory service contracted for and provided to organizations by specially trained and qualified persons who assist, in an objective and independent manner, the client organization to identify ICT problems, analyze such problems, recommend solutions to these problems, and help, when requested, in the implementation of solutions.", p 56

THE TREND OF ICT IN DEVELOPED COUNTRIES

ICTs are now part of the business world serving as one of the basic strategic tools. Many business organizations are making use of them eventhough the degree of capacity and capability may differ. As managers of businesses experience more volatile marketplaces, global competition, shortened product life cycles, customer pressures for tailored offerings and tighter performance standards, they increasingly depend on new information systems that involve ICT.

Keeping up-to-date and getting profits from ICTs' use became difficult as ICTs scale and range increased. Many business organizations were stuck with outdated equipment, others had ICT experts that couldn't cope up with the fast growing field, and yet others could not concentrate on their core business activity because they had to catch up with the new technologies. Companies had to retain the capacity to regularly adjust their positioning in each area; and sometimes radically change their chosen business strategies, ICT platforms, or arrangements for delivering services.

Many engaged management consultants to deal with these strategic issues. Management consulting is a growing field in ICT sector. According to Wilkinson (1995) management consulting is:

> "..an independent and objective advisory service provided by qualified persons to clients in order to help them identify and

> analyze management problems or opportunities. The management consultants also recommend solutions or suggest actions with respect to these issues and help, when requested, in their implementation. In essence, management consultants help to effect constructive change in private or public sector organizations through the sound application of substantive and process skills." p14

Although management consulting has its origins in biblical times, it became active in the mid-eighteenth century. In its early days the service of consulting was applied by accountants, followed by engineers (scientific management and industrial engineering). Then focus shifted to organizational planning, management development and training, administration policies and personnel administration. Services such as computer system analyses and inventory management were added in response to developments in information and communication technologies.

Management consultants now specialize in information systems, automated offices, financial analysis and modeling, budgetary and cost controls, organization structures, personnel compensation, strategic planning and a host of other areas. They are generally grouped under :- generalist management firms; public accounting firms; specialized consulting firms; individual practitioners; internal consulting group; research oriented organization and ICT consulting. According to Kubr (1996), Information and Communication Technology (ICT) consulting is :-

> "An independent professional advisory service contracted for and provided to organizations by specially trained and qualified persons who assist, in an objective and independent manner, the client organization to identify ICT problems, analyze such problems, recommend solutions to these problems, and help, when requested, in the implementation of solutions.", p 56

When business organizations make use of these kind of service it is referred to as outsourcing ICT. ICT outsourcing is defined as:

> " a decision taken by an organization to contract out or sell the organization's IT assets, people and or activities to a third party supplier, who in exchange provides and manages assets and services for monetary returns over an agreed time period. (Encyclopaedia Britannica, 1997)

ICT outsourcing became increasingly popular and is often used as a tool for coping with rapid changes in technology and in the business environment. In the developed world, it is probably the fastest growing and changing sector of management consulting (Wilkinson, 1995).

Coupled with the flourishing global outsourcing market place, the scope of ICT services being outsourced has been growing too. In fact the ICT outsourcing decisions have been divided according to the ICT services being outsourced. According to Currie (1998) and Lacity (1996), the major types are (a) total outsourcing, (b) multiple-supplier outsourcing, (c) selective outsourcing, (d) joint venture/strategic alliance outsourcing and (e) insourcing.

The following are brief description of each:-

(a) Total Outsourcing:

Total Outsourcing is when an organization chooses to outsource as much as 80% of its ICT facility, usually to a large single consultant. This will help in the nurturing of a 'partnership' between client and supplier. The reasoning for total outsourcing is to enable the client to concentrate on its core business activities, thus leaving the supplier to manage the ICT facility, which is regarded as a support function.

(b) Multiple-supplier outsourcing:

In here, the client organization tends to safeguard itself from being dependent upon a single consultant, which ultimately will control all its ICT assets. It makes use of several experts at the same time. This type of outsourcing encourages competition and innovation between consultants by ensuring that contracts are short-term and liable for renewal not necessarily

with the same supplier (or combination of suppliers).

(c) Selective outsourcing

The practice of outsourcing selected ICT applications to vendors while retaining other ICT applications in-house is referred to as " selective outsourcing". Selective outsourcing locates selected ICT functions with external providers while still providing between 20 % and 80 % typically 24 % of the ICT budget. The vendor becomes responsible for delivering the result of the selectively outsourced ICT activities, while the customer remains responsible for delivering the result of the insourced ICT activities.

(d) Joint venture/strategic alliance outsourcing:

Yet another type of outsourcing is the joint venture/ strategic alliance outsourcing where an organization enters into a joint venture with a supplier on a shared risk/reward basis. This may involve selecting an existing ICT supplier or helping to create a new company to which work can be outsourced. In some respects it is a hybrid between external and internal ICT sourcing.

(e) Insourcing :

This is where an organization opts to retain a large centralized ICT department and insource management and technical capabilities according to the peaks and troughs of ICT work. This means that an organization either chooses to do all its ICT work in-house using its own permanent staff or combines this with external contractors hired for short-term periods to work on specific ICT projects.

These outsourcing decisions are put in effect by engaging the experts in the ICT field. These are the ICT consultants that will engage in the process of the outsource activities.

THE CURRENT STATE OF ICT CONSULTING IN ETHIOPIA

The first mainframe computers were introduced in Ethiopia in 1960. These initial computers were concentrated in headquarters of ministries (finance, defense), central statistics offices and major public utility agencies (telecom, railways, electric power etc.). Along with the introduction of these computers in the country, information and communication technologies consultancy started with firms engaged in assisting organizations to implement the technologies. By the end of 1960, consultancy was mainly attached to major multinational companies such as IBM and NCR that opened mainframe support offices in the country. The service covered development of customized software for payroll and management of public utilities, sale of peripherals of imported equipment and training. (Lishan[1], 1999)

Increasing power of computers and pressures from various angles to adopt personal computers as office tools simulated consultancy activities in the country. In the 1990s ICT consultancy was strongly characterized by the wide spread of application training firms.

A few of these firms deal with the supply of hardware and, to a lesser extent, in software, although many are engaged in training in the applications and use of standard office software. Some specialize in the adaptation, customization or development of administrative and technical software.

In regard of options discussed by Heeks (1999) where there are several options for developing countries in the ICT consultancy service, Ethiopia has yet to develop the necessary ICT industry to export services and packages. Current information and communication technology consultancy is limited to domestic services. Although capacities exist for producing domestic packages, there has not been incentive to achieve that. Promising opportunities in language based tools have existed for a long time, however minor efforts in the area were impeded by difficulties ranging from standardization to lack of expertise and software engineering discipline. However, Ethiopia presents various opportunities that could be used as stimulus for growth of information and communication industry if properly managed. Thus giving great possibilities to the country in the sector of domestic services and packages as well as export of services and packages (Lishan[1], 1999).

A recent study was conducted on the ICT consultancy in Ethiopia where the author examined

the ICT consultancy services provided in the country. He pointed out that, eventhough technology has greatly spread into the country, ICT consultancy service is yet an ignored sector. He remarked that most people do not accept ICT consulting as worthy to use for the promotion of their management information system activities and the fulfillment of their information need in decision making. Due to this, they rather look for advice from friends who have similar experiences. This generally produces undesirable results and it adversely affects the activities of the organization. (Adebabay, 1999)

ICT CONSULTANTS

LIST OF ICT CONSULTANTS IN ADDIS ABABA

- ALLIED TELETRONICS ENGINEERS PLC
- CBC (CITY BUSINESS CENTER)
- COMPUTER PROFESSIONALS UNITED PLC
- NEC CORPORATION
- EXCEL INFORMATION TECHNOLOGY PLC
- GELLATLY HANKEY COMAPNY-IT
- DAS COMPUTER ENGINEERING PLC
- MKTY INFORMATION TECHNOLOGY
- SOLO-SYSTEMS
- TSD ENGINEERIN PLC
- VISION COMPUTER

WHAT IS AN ICT CONSULTANT?

An Information and Communication Technology consultant is:

> " an individual qualified by education, experience, technical ability and temperament to advise or assist on a professional basis in identifying, defining and solving specific problems involving the organization, planning, direction, control and operation of the ICT system. The consultant serves the system as an impartial, objective advisor, and is not an employee of its organization. (Encarta, 1994)"

Services of ICT consultants are requested by business organizations because they are usually believed to provide expertise that the organization could not build internally. The services that these experts provide include:

- reviewing and developing ICT strategy;
- training and education in ICT;
- evaluating the ways in which ICT systems and facilities can be provided to the business;
- reviewing ICT performance;
- providing specialist guidance on areas such as data structures, technical architectures, system development , technical telecommunication or office systems;
- recommending or providing a second opinion on the choice of hardware or software;
- reviewing projects either at the outset or when they seem to be in trouble;
- managing projects;
- providing system development resources ranging from supplying individual contractors to the complete provision of an outsource development facility;

- clarifying expectations up-front;
- establishing schedules for deliverables;
- communicating the progress and problems of proposed resolutions;
- identifying follow-on support opportunities;
- Submitting clear and valuable reports (Day, Kubr, 1996).

T

WHO WE ARE | PREVIOUS EXPERIENCE
THE SERVICES WE PROVIDE | COMMENTS
NEWS ABOUT CURRENT AGREEMENTS | HOW TO CONTACT US

WHO WE ARE

ALLIED TELETRONICS ENGINEERS PLC. (ATE) is a private limited company formed by a group of experienced engineers and professionals in Ethiopia. Its board of directors is an elite inner circle of executives with wide experience in very high management positions of telecommunications, power supply, industry, trade and transport. Some of the members of the board and managers of this company have not only been managing private and state owned, big institutions, but have also been holding important positions in international organizations. Thus ATE is a company assured of not only of high level managerial and technical skills, but also of wide experience and vast international connections. A COMPANY WITH KNOW-HOW.

Back to top of page

THE SERVICES WE PROVIDE

ALLIED TELETRONICS ENGINEERS PLC is a company with multi purpose. It mainly deals with consultancy, design, supply and maintenance of all power and communication systems. Whether you are at home or in office or managing cultural and entertainment centers or in medical profession or in commerce the ubiquitous, electrical, electronic and electromechanical systems are around you in the form of:

- **audio/video, lighting, heating cooling systems, etc...**
- **medical equipment**
- **computing and communication equipment**
- **control and measuring devices.**

Think of the satisfaction you derive when your system, equipment or appliances work smoothly without a hitch.

Following is a detail description of our main expert services:

- **CONSULTANCY**
- **DESIGN**
- **SUPPLY**
- **MAINTENANCE**
- **COMMUNICATION**
- **ASSEMBLY**
- **MANUFACTURING**
- **TELEPHONY**

ATE is ready to handle all the intricate affairs of advanced technology wherever its services are required. We are where you need us and are there when you need us.

We are there:

- **to advise you when you make purchase of electronic and electrical equipment, systems, etc.**
- **to prepare technical specification and contracts for you;**
- **to check and test your electronic and electrical systems;**
- **to prepare bids, analyze then and make purchase recommendations for you;**
- **to maintain your audio.video, TV and household electronic and electrical appliances;**
- **to prepare feasibility studies and offer consultancy services in the areas of telecommunications, aviation communication transport, electrical power supply systems and broadcasting for you;**
- **to design, supply and /or install electronic alarm systems at your business premise, living quarters and property,**
- **to design lighting systems, sound systems, power systems for industries, assembly halls, cinemas, music and theatre halls;**

- to lease public address systems like microphones, amplifier, loud speakers for public gatherings;
- to prepare design, install and maintain electrical, electronic and electromechanical systems for you.

ALLIED TELETRONICS ENGINEERS also engaged in

- assembly and manufacture of electrical accessories;
- design and assembly of power system control cabinets, systems protection facilities, etc;
- import of components and local assembly of electric and electronic equipment;
- distribution of electrical and electromechanical systems, electronic components, measuring devices, etc.

Back to top of page

NEWS ABOUT CURRENT AGREEMENTS

- APRIL 26, 2000: The company signed a joint agreement with the Oromia regional offices to study the system of communication that includes the telephony, postal and radio communications. The contract was signed with the higher official at the Oromia office for three years plan and the study is supposed to be submitted within six months.
- Another contract is expected to be signed tomorrow May 8, 2000 with the Regional 14 administration office of tourism.

Back to top of page

PREVIOUS EXPERIENCE

- December 1999: a full system installation to a private company
- September 1999: UPS choice and installation
- August 1999: Satellite dish installation to some major embassies in the capital
- February 1998: Communication system study and development

Back to top of page

HOW TO CONTACT US

You can contact use through:

- Telephone: 251-1-518362 or 251-1-518256
- Fax : 251-1-52-148759 or 251-1-518796
- E-mail: ferro@telecom.net.et

Back to top of page

Declaration

The thesis is my original work and has not been presented in any other university.

(Signed)
Kidist Shawul / June 19, 2000

The thesis has been submitted for examination with my approval as university advisor.

(Signed)
Dr. Lishan Adam / June 19, 2000