

**THE EFFECTS OF INFORMATION COMMUNICATION TECHNOLOGY ON
FINANCIAL PERFORMANCE OF COURIER SERVICE PROVIDERS IN KENYA: A
CASE STUDY OF DOCUMENT HANDLING LIMITED**

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D61/60126/2011**

**RESEARCH PROPOSAL SUBMITTED IN PARTIAL FULFILLMENT FOR THE
REQUIREMENT OF DEGREE OF MASTER OF BUSINESS ADMINISTRATION
SCHOOL OF BUSINESS UNIVERSITY OF NAIROBI**

NOVEMBER, 2013

DECLARATION

This research proposal is my original work and has not been presented for award of any degree in any university

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This research project has been submitted for examination with my approval as university of Nairobi supervisor.

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DEDICATION

To my lovely mum Angelina Kamene, my sons Cortney Saja and Jayan Taj for their support as a family and making me who I am today.

ACKNOWLEDGEMENTS

Conducting a study of this nature was not possible without the help and support of a range of individuals and organizations. I would like to thank the almighty God for giving me good health, wisdom and courage of undertaking this research. I also humbly and sincerely thank my supervisor at the University of Nairobi School of business, department of Accounting and Finance, Dr. Josiah Aduda, Who kept me on track for the duration of my research study and have always, shown interest and understanding in my chosen subject. Bill kibuye has been instrumental in assisting me with the data analysis with the aid of SPSS.I wish to thank my family and those who are special to me for being patient with me during the times when they needed me the most. These include my father, Peter Kanuna, sons Cortney Saja and Jayan Taj, Mum, Angelina Kamene and Brother Moses Mutuku who gave me the emotional and financial support. Last but not least, my friend, Ann Kahindi who kept on encouraging and inspiring me.

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ABBREVIATION

ANOVA Analysis of Variance

CTI Computer Telephony Integration

DHL Document handling limited

ICT Information Communication and Technology

IT Information Technology

UPS United Parcel Service

ABSTRACT

The aim of this study was to establish effects of information communication technology on financial performance of courier service providers and to determine the effects of management information systems on financial performance of courier service providers. Document handling limited was used as a case. Data was edited, classified, coded and tabulated to analyze quantitative data using statistical package for social science (SPSS version 17). Tables were used for further representation for easy understanding and analysis. The data was summarized, coded and tabulated.

The findings of the study revealed a strong positive correlation between the predictor's variables and independent variables. An F ratio is calculated which represents the variance between the groups, divided by the variance within the groups. The results indicated that there is more variability between the groups (caused by the independent variable) than there is within each group. This study adopted a survey research method to show the relationship between information's communications Technology and performance practices. The study focused on Document Handling Limited. Document Handling Limited chosen because of its geographical coverage, large customer base, profitability levels and ease of access to information. The study used secondary data. The secondary data was collected from the financial statements of Document Handling Limited and books to collect information on annual earnings of the Company.

Based on the findings, division managers, regional managers, and client service officers should use a management information system that generates courier information reports either in hard copy or on-line. Most computer-based management systems allow the user to perform asset allocation modeling, investment simulation, compliance monitoring, re-balancing, trading interface, benchmarking, client statement preparation and presentation, real-time valuation, and investment risk analysis. Technology managers should be required to periodically verify that investment performance reports are accurate and that investment policy compliance statements are updated whenever a material change occurs.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

We are living in a world where movement of goods, services and people crossing national borders has increased at an alarming rate through courier services. According to Hill (2003) courier is a person or company employed to deliver messages, packages and mails. We are living in a world where the national borders are gradually being erased and the world is being turned into one huge village. These are times in which a person will be driving to work in a car designed in Japan by Toyota and assembled in Kenya by General Motors Kenya Limited, from components made of Korean steel and Malaysian rubber. He may fuel the car at a petrol station owned by a multinational company such as Shell. This fuel could have been made out from oil pumped out of a well off the coast of West Africa by a French owned company and transported to the Kenyan coast by a ship owned by a Chinese Shipping line. While driving to work, the person will talk to his broker on a Nokia cell phone designed in Finland and assembled in Texas using chipsets designed in Taiwan, all the above facilitated by courier services.

This movement of goods, services and other resources has been facilitated by the phenomena called courier. According to Hill (2003), courier refers to a shift towards a more integrated and interdependent world economy. courier reflects a business orientation based on the belief that the world is becoming more homogenous and that distinctions between national markets are not only fading out, but in some cases, will eventually disappear. From these definitions it is evident that courier represents integration of different businesses. This is because no business can exist independently and each has to depend on others for resources. With international trade barriers breaking down, firms across industry sectors are recognizing the opportunities arising from courier sourcing, off-shoring, and growing domestic demand in emerging markets. For courier service providers, this internationalization of the supply chain has created both challenges and opportunities. Pavlik (1987) argued that Courier intermediaries focused on international movements including freight forwarders, customhouse brokers, non-vessel operating carriers as well as export management companies, characterize themselves as “Third Party courier providers” capable of offering complete “solutions” for the movement of international freight. The current trend of changes in global business is highlighting the importance of the growth in

courier services in the development of Third World business and industries. Literature reveals that many of these Third World nations are faced with the challenges facing international courier services, the task of the increase in the growth of courier services is quite challenging. Attempts to understand these challenges is by looking at factors like private customers, powerful and rapid change, global competition and information communication technology and transportation that affect the growth of courier services.

1.1.1 An Overview of Courier Services

In ancient times runners and hoping pigeons were used to deliver timely messages. When the horse became domesticated its use was rapidly adopted by couriers, before there were mechanized courier services foot messages physically ran miles to their destinations. To this day there are marathons directly related to actually historically messenger routes. A courier is a person or company employed to deliver messages, packages and mails. Bessant, J., & Pavitt, K. (2005) stated that a courier service is an organization which offers special delivery of packages, money, documents or information. Courier services usually boast faster delivery times than any alternative method of transportation documents, and many services in the modern world rely on them. The idea of couriers and courier services has been around almost as long as civilization, with rulers in antiquity using couriers as a means to make new laws. Courier services involve transportation of documents and parcels with the following characteristics; speed, international, local, door to door, reliable and secure. Courier markets can be described through courier, express parcels, freight and logistics.

In modern age of international business the couriers services has become keystone of enterprise, even as emerging technologies such as the fax machine and internet have rendered them less useful in some areas. Courier are distinguished from ordinary mail services by features such as speed, security, tracking, signature, specialization, and individualization of services and committed delivery times, which are optional for most everyday mail services, as a premium services, couriers are usually more expensive than usual mail services and their use is typical restricted to packages where one or more of these features are considered important to warrant the cost.

1.1.2 Information Communications Technology

Information communications technology (ICT) function is responsible for designing, implementing and maintaining many of controls over and organization's business processes. IT has a critical role in collecting, processing, and storing data that is summarized and reported in financial statements (Cannon and Crowe, 2004)

Financial Performance

Financial Performance is the Subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation (Fama, 1992). A subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. There are many different ways to measure financial performance, but all measures should be taken in aggregation. Line items such as revenue from operations, operating income or cash flow from operations can be used, as well as total unit sales. Furthermore, the analyst or investor may wish to look deeper into financial statements and seek out margin growth rates or any declining debt.

1.1.3 Courier Services Providers in Kenya

DHL was Founded in San Francisco almost 40 years ago by 3 budding entrepreneurs - Adrian Dalsey, Larry Hillblom and Robert Lynn - DHL has continued to expand at a phenomenal rate. Today, it stands tall as the global market leader of the international express and logistics industry. Back In 1969, DHL took its first small steps in building for the future by personally shipping papers by airplane from San Francisco to Honolulu. The years passed and the DHL network grew ever larger, gradually reaching out to new customers in every corner of the world. At the same time, the marketplace developed and became more complex, so DHL adapted to meet the changing needs of its customers - both at global and local level.

Today, DHL's international network links more than 220 countries and territories worldwide and employs some 300,000 employees. DHL also offers unparalleled expertise in express, air and ocean freight, overland transport, contract logistics solutions as well as international mail services. From 3 employees in 1969 to 300,000 employees in 2008, the approach and dedication has remained the same. Our success has always been based around delivering excellent service for their customers. Never complacent, DHL has become a brand acknowledged for personal commitment, proactive solutions and local strength. At the heart of its success are its employees who focus on the customer's needs and provide individually customized solutions. DHL is a Deutsche Post World Net brand. The group generated revenues of more than 63 billion Euros in 2007. The world's largest express and logistics Network DHL is the global market leader in international express, overland transport and air freight. It is also the world's number one in ocean freight and contract logistics.

BM Courier is Kenya's Premier Service provider offering tailor made solutions to its customers' courier needs. It prides itself in efficient and secure deliveries to businesses and individuals throughout the country. Its mission is to maintain professionalism at all time while creating customer focused services. It has a country wide network that caters for all customers courier needs. Using its fleet of motorcycles and vans, BM Courier is the courier company to: Give you precise point to point pricing, real-time proof of pickup and delivery and provide you with fast and efficient delivery. Whether you are sending parcels or documents – no one delivers better value throughout Kenya other than BM Courier. It prides itself on consistently high levels of on-time parcel deliveries the next morning. It ensures that you can send and receive goods when you want them. Same day service is tailored to suit time-critical and time-definite deliveries. It is available in all the cities within the Kenya. Its cut-off time for the collection of items for this service is 1400hrs. BM Courier offers business a reliable, affordable and dedicated rider who will collect and deliver your parcels or documents as per your instructions. The rider comes with a fully fuelled and maintained motorbike. Its riders are trained on customer care hence the perfect ambassador for business. BM courier will certainly ensure meeting your customers' expectations.

Data Rush Services Limited commenced operations in June 1997. Data Rush Services Limited was among the first Courier Companies to be licensed by CCK. It offers courier services to the Kenyan business Community within Nairobi and its environs, Mombasa, Kisumu, Eldoret, Nakuru, Meru, Thika, and Athi River. Having a crew of up to 150 employees, a fleet of vehicles, trucks, vans and bikes, Data Rush is committed to giving its esteemed clients quality services to give them value for their money. Its Vision is to be the most reliable and profitable courier and logistics service provider in East African region and beyond. Its Mission is to provide most reliable and consistent courier services in the region. This shall be achieved by providing exceptional customer service and staying focused on their needs and demands hence giving them satisfaction and value for their money. Its Value statement is to observe highest level of integrity in all areas of operations, its business ethics is anchored on respect for the rule of law, endeavour to respect all members of staff and society and ensuring highest level of safety for all, and conservation of resources.

1.2 Research Problem

For any firm operating on the global platform, the internal and external business environments are bound to pose challenges that may cause the firm not to meet its goals and objectives. At the heart of courier, as evidenced by their strategic plan, their aim is to be a world leader in the courier services industry and has listed some key objectives to be met in order to achieve their vision. There are various barriers to successful business in the international arena including: managerial barriers (limited ambition, unrecognized opportunities, lack of skills, fear, inertia), governmental barriers (trade, capital and exchange controls etc), non-tariff barriers, socio-cultural barriers (language, religion, lifestyle etc) and technology (ICT) that cause pose challenges to multinational companies (Korth, 1985). In the case of courier companies in Kenya like DHL, BM and data rush, there are three main challenges encountered namely Information communication Technology, staff training and motivation and service delivery. It is against this background that the purpose of this study will be to investigate the direct and indirect effects of ICT on financial performance of courier companies in Kenya. The literature review shows that much has been done in general, however, no known study to the researcher has been done to address the effects of ICT on financial performance of courier companies in Kenya is a crucial gap to be filled by this study.

Murianki (2006) researched on manager's perceptions on the effectiveness of the ICT function in realizing diversification and improvement in profitability. The research was a case study of DHLKenya Ltd. This research will extend the study in the field of financial performance by evaluating the factors that affect service delivery of courier services companies in Kenya.

Musyoki (2009), researched on factors affecting financial management operations. The research was a case study of selected BM Kenya limited. The variables studied included process management, accounting practices, regulatory framework, and human resource practices. This study will offer more insight by including other variables that have an impact on the independence of ICT such as the reporting structure and financial performance in courier companies in Kenya. Other variables included are the effect of technology and proficiency and skills of service delivery.

1.3 Objectives of the Study

1. To establish the relationship between application of ICT on financial performance of courier service providers in Kenya.

1.4 Value of the Study

This study will be of value to the following group of people:

To the management of courier companies the top management will utilize this report to improve their performance of their employees by developing their capacity through training and consequently boost their growth output.

To Courier Companies the study will be used to understand the challenges they are likely to face. This will assist them in designing and implementing appropriate strategies for growth.

To the Government of Kenya the study will help in policy formulation in regard to challenges they face in conducting business, hence implantation of appropriate policies that will favor more investors in the country as a way of archiving vision 2030.

The potential investors will benefit from the study in that they will use the knowledge to understand the past and future trends of international courier services in Kenya. External investors will also benefit from the findings of this study; they will be able to make wise decisions before investing in the courier services companies.

To academicians and scholars the findings of this study become useful to forming the basis for future research on the subject, providing a critical examination of the field. Pavlik (1987) observed that critical research is usually offered as “a vehicle for improving the profession, rather than questioning its role or function in society.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section will seek to discuss key theories of courier service, highlight findings of other researchers and authors by reviewing reports, studies, historical records, books and other information that has been documented relating to the effects of ICT on financial performance of courier service providers. It will begin by introducing courier services and their origin then proceed to explain each of the factors that are perceived to be a determinant of financial success to the businesses.

2.2 Theoretical Review

2.2.1 Development Theory

Development theory attempts to explain qualitative changes in the structure and framework of courier services in the society, that help the society to better realize its aims and objectives. Development can be broadly defined in a manner applicable to all societies' at all historical periods as an upward movement featuring greater levels of energy, efficiency, quality, productivity, complexity, comprehension, creativity, mastery, enjoyment and accomplishment. Development is a process of social change, not merely a set of policies and programs instituted for some specific results (Davin, 1998). Courier growth process has been going on since the dawn of history. But during the last five centuries it has picked up in speed and intensity, and during the last five decades has witnessed a marked surge in acceleration. According to this theory, the basic mechanism driving social change is increasing awareness leading to better organization of courier services. Life evolves by consciousness and consciousness in turn progresses by organization transfer and receipt of goods and services.

When society senses new and better opportunities for progress it accordingly develops new forms of organization to exploit these new openings successfully. The new forms of organization are better able to harness the available social energies and skills and resources to use the opportunities to get the intended results via efficient delivery.

Development is governed by many factors that influence the results of developmental efforts. There must be a motive that drives the courier change and essential preconditions for that change to occur. The motive must be powerful enough to overcome obstructions that impede that change from occurring. Development also needs resources such as capital and technology and the availability of supporting infrastructures. The pace and scope for courier development varies according to the stage that society is in during the developmental process. The three main stages of courier evolution and development are physical, vital (the term vital refers to the dynamic and nervous social energies of humanity that propel individuals to accomplish) and mental and all these three have their own unique characteristics.

2.2.2 Transit Theory

Transit theory had been proposed by Victor Tren in 1964. This theory is based on the hypothesis that courier firms adjust their logistics patterns in the organization on the basis of anticipated satisfaction of valued goals set by them. The firms modify their behavior in such a way which is most likely to lead them to attain these goals. This theory underlies the concept of performance management in courier companies as it is believed that performance is influenced by the expectations concerning future events. (Salaman et al, 2005) Salaman says there are two theories underlying the concept of performance management in courier-based firms: the time-net theory and directive theory. Time-net theory had been proposed by Locke Len in the year 1968. This theory suggests that the delivery time established by a courier firm play an important role in motivating its clients for superior performance. This is because the firm keeps following their goals and if these goals are not achieved, they either improve their performance or modify the goals and make them more realistic. So, in any case the performance is improved and this is what the performance management system aims at. (Salaman et al, 2005)

2.2.3 Time-Efficiency Theory

Time efficiency theory assumes that firms are clients whose behaviors are aligned with the objectives of their customers in a timely manner. The theory argues and looks at a different form of commitment for courier and logistics firms drawn from organizational theory. Courier firms are viewed as loyal to the customers delivery interests in achieving high performance (Bolt,

1998). The dominant motive, which directs delivery firms to accomplish their job, is their desire to perform excellently. Specifically, workers are conceived as being motivated by a need to achieve, to gain intrinsic satisfaction through successfully performing inherently challenging work, to exercise responsibility and authority, and thereby to gain recognition from peers and bosses and customers. Therefore, there are non-financial motivators for delivery teams.

The theory also argues that an organization requires a structure that allows harmonization to be achieved most efficiently between management and field team. In the context of firm's leadership, this situation is attained more readily if coordination is upheld. This leadership structure will assist them to attain superior performance to the extent that the management exercises complete authority over the company and that their role is unambiguous and unchallenged. In this situation, power and authority are concentrated in teams. Hence, the expectations about corporate leadership will be clearer and more consistent both for subordinate managers and for other members of the corporate board. Thus, there is no room for uncertainty as to who has authority or responsibility over a particular matter. The organization will enjoy the benefits of unity of direction and of strong command and control.

2.3 History of Courier Services

Courier Services are companies that transport and deliver documents, packages, and larger shipments of products, although traditionally they specialized in the rapid delivery of such items as legal documents that required signatures. Pavlik (1987) noted that they provide services to companies and individuals who need rapid service, accountability, and tracking that regular mail does not accommodate. Major courier services that performed these functions in the early 2000s included commercial delivery services, the U.S. Postal Service, and bicycle messenger services.

Courier services began during the late nineteenth and early twentieth centuries, with small companies in a handful of cities across the United States. When few homes had telephones, personal messages had to be carried by hand. Some early companies provided delivery of luggage and other packages. With the rise of large retail and department stores in the early twentieth century, package delivery services became even more popular. The scale of such services grew over the next several decades. Although fuel and rubber shortages during World

War II caused a decline in the courier industry, the use of air freight by courier services after the war allowed for wider markets.

Courier services became multifaceted and competitive after 1970 because of the increasingly far-flung nature of business operations in the international economy, the popularity of mail-order retailing, and rising postal rates. Courier services overlapped other forms of transport, such as trucking, and the differences became less distinct (Fornell, 1992; Bolton, 1998). Commercial delivery services, once a supplement to the U.S. Postal Service, competed with the government operated mail system. The Postal Service responded with greater emphasis on its overnight Express Mail delivery and two-day Priority Mail service. The growth and diversification of the delivery industry raised regulatory issues. Companies that delivered by plane or truck were often governed by separate laws regarding rates and other aspects of their operations. In the late 1980s the document delivery business faced new competition with the development of fax machines and Electronic Mail. The need for physical delivery of some items remained, however, and the delivery industry was bolstered by the continuing growth of the global marketplace, some delivery companies began to branch out and offer new services to their clients. These included "logistics," or support, services to help clients increase efficiency by electronically tracking materials used in manufacturing and assisting with processing sales orders and shipments.

Among the oldest and largest U.S. private delivery companies is United Parcel Service (UPS), founded in Seattle, Washington, as the American Messenger Company in 1907. Originally a local parcel delivery service for department stores, UPS expanded and established a large network to ship and deliver packages. In the early 2000s, UPS was the largest carrier for e-commerce, shipping on-line purchases to customers worldwide. In 1999, UPS shareholders voted to make 10 percent of the company stock available to the public. Another major company, Federal Express, founded by entrepreneur Frederick W. Smith in the early 1970s, pioneered large-scale overnight delivery by air, using its own fleet of planes and a central terminal (originally in Memphis, Tenn.) to sort and reroute items. Both the large commercial courier services and the U.S. Postal Service have increased the speed of national and international package delivery due to the advent of wide-body airplanes that can carry an increased amount of freight (Fornell, 1992; Bolton, 1998). Yet, bicycle messenger services provide an invaluable and

timeless service for small-scale, local delivery. Bike messengers were used as early as the late nineteenth century for rapid delivery of Western Union telegrams and government documents. During the 1980s bicycle messenger services became a particularly popular way to deliver items quickly within cities. Their numbers declined slightly with the advent of fax machines and e-mail, but in the early twenty-first century their services remained important links between businesses in large cities like New York and Washington, D.C., as well as in smaller cities throughout the world.

2.4 Information Communications Technology

Information communications technology (ICT) function is responsible for designing, implementing and maintaining many of controls over and organization's business processes. IT has a critical role in collecting, processing, and storing data that is summarized and reported in financial statements (Cannon and Crowe, 2004). Advances in ICT continuously render control procedures obsolete; and the "value" of traditional internal audit becomes seriously questioned (Tongren, 1997). As ICT changes occur more quickly, auditors must keep pace with emerging technological changes and their impacts on their client's data processing system, as well as their own audit procedures (Rezaee and Reinstein, 1998). Internal audit functions are looking at technology as a way of improving the organization's productivity and risk management process. Technology has helped internal audit departments to automate and adopt best practices in audit and assurance processes. Continuous auditing and monitoring are good examples and this has resulted in freeing of internal audit professionals to lend their expertise in other high impact areas.

Traditionally, internal audit's testing of controls has been performed on a retrospective and cyclical basis, often months, if not longer, after business activities have occurred. The testing procedures were often based on a sampling approach and included activities such as reviews of policies, procedures, approvals, and reconciliations. Unfortunately, this approach only affords internal auditors a narrow scope of evaluation that is often too late to be of real value to business performance or regulatory compliance. In some organizations; however, technology has been employed to perform continuous auditing, a process that automatically performs control and risk assessments on a more frequent basis (Institute of Internal Auditors, 2009). Continuous auditing

changes the audit paradigm from periodic reviews of a sample of transactions to ongoing audit procedures that test 100 percent of transactions. The power of continuous auditing lies in the intelligent, uninterrupted testing of controls and risks that results in timely notification, follow-up and remediation of gaps and weaknesses. By changing the overall approach in this way, auditors will develop a better understanding of their business environment and the potential risks to their company to support compliance and drive business performance (Institute of Internal Auditors, 2009).

Audit management software such as teammate on the other hand has helped to increase efficiency and productivity of the entire internal audit process, including: risk assessment, scheduling, planning, execution, review, report generation, trend analysis, committee reporting and storage. CAATs are computer programs and data the auditors use as part of the audit procedures to process data of audit significance contained in an entity's information systems. The data may be transaction data, on which the auditors wish to perform tests of controls or substantive procedures, or they may be other types of data. Auditors can use CAATS to review files to gain evidence of the existence and operation of certain controls. CAATS may consist of package programs, purpose-written programs, utility programs or system management programs. Some audit procedures may not be possible to perform manually because they rely on complex processing (for example, advanced statistical analysis) or involve amounts of data that would overwhelm any manual procedure. In addition, many computer information systems perform tasks for which no hard copy evidence is available and, therefore, it may be impracticable for the auditors to perform tests manually.

2.4.1 Impact of Information Communications Technology (ICT) on Financial Performance

Knowledge is the fundamental driver of increased productivity and global competition and the innovations in the ICT field have provided a platform for businesses to operate on a global scale. ICT refers to technologies that are used to collect process and store, retrieve, disseminate and transmit information. This encompasses use of electronic devices or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems

and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning (Ministry of Information and Communications Technology Uganda, 2009). Presently, the extensive use of ICT is changing the way businesses operate. Hipp and Grupp (2005) refer to ICT as a very important tool for innovation in this present era. The benefits of ICT for a firm includes saving of inputs, general cost reductions, higher flexibility and improvement in product quality. Mouelhi (2009) adds that ICT plays a major role in networking and communication as firms use these technologies to facilitate communication among employees and reduce co-ordination costs. ICT enhances the production process in organizations as monitoring technologies could be used to reduce the number of supervisors required in the process. ICT has been of prime importance in information gathering and dissemination, inventory control and quality control with ICT facilities being used for strategic management, communication and collaboration, customers' access, managerial decision making, data management and knowledge management since it helps to provide an effective means of organizational productivity and service delivery. Application of ICT in businesses causes fundamental changes that can provide powerful strategic and tactical tools for organizations if properly applied and used. This could have great impact in promoting and strengthening organizational competitiveness.

Mouelhi (2009) argues that although organization cultures and business strategies shape the use Of ICT in organizations, more often the influence is stronger the other way round. ICT Significantly affects strategic options and creates opportunities and issues that managers need to address in many aspects of their business. The key impacts of technology and the implications for management are as follows: ICT creates new opportunities for innovation in products and services. Services which used to be delivered in person can now be delivered over networks. Among the key levers are: resequencing which involves parallel processing of data-bases, simultaneity; making information instantly available in several systems, time extension; that involves offering 24 hour a day; 365 days a year service, portability; that is taking service and products closer to the user and finally reusability; using information captured for one purpose (e.g. transactions), and using for others e.g. customer targeting. Newer types of ICT such as electronic mail and groupware are creating significant changes in the way that information flows

around group ware, and between them and their customers and suppliers. It can hasten the development of more open and innovative cultures, because the systems developers have not been culturally sensitive to the department or group ware, in which the new systems are to be, used (Rastrick & Corner, 2010).

For many years it has been argued that ICT will enable larger spans of control and the flattening of group ware. This has at last happened, but due as much to initiatives like BPR (Business Process Reengineering) and the drive to cut costs. Research on whether ICT encourages centralization decentralizations produced ambivalent results. Many companies have centralized operations (for efficiency) while at the same time decentralizing activities. It now seems clear that ICT enables a greater variety of structures. In particular it enables more flexible and fluid structures - networked structures, dispersed team and teams that come and go as needs change. ICT is rapidly entering the era where it supports unstructured management processes as well as highly reutilized business processes. It provides more effective ways of accessing information from multiple sources, including use of external information on databases and the Internet.

However, group decision support systems that operate in a meeting room environment can help enhance decision making, but it does need someone who is an expert facilitator to help the group master the technique of structured discussion. ICT is dramatically changing the nature of professional work. Rastrick, K., & Corner, J. (2010) add that there are few offices where professional do not make use of personal computers, and in many jobs involving extensive information and knowledge based work, the use of the computer is often a core activity. Becoming effective not only requires traditional skills of organizing, thinking, writing etc., but knowing how best to use the power of ICT for researching sources, accessing information, connecting to experts, communicating ideas and results, and packaging the knowledge for reuse. One aspect of this is the need for hybrid managers - people who are competent at both their discipline and IT. The way in which ICT diminishes the effect of distance means that it creates a variety of options for reorganizing the workplace. At a basic level, it can provide more flexibility in the office, allowing desk sharing and a degree of location independence within a building (this will develop as CTI (Computer Telephony Integration) and wireless PCs become more firmly

established. At another level it permits the dispersion of work teams, thus saving costs of relocation and travel. It has also created the mobile professional and also allows people to work effectively from home (Tidd, Bessant, & Pavitt, 2005).

2.4.2 ICT Application in the Courier Service Industry

Record keeping: needless to say, courier companies have a lot of business information that needs to be stored. Mouelhi (2009), add that Information such as customer activities, billing and payroll data is stored in databases which are linked to each other to enable automatic generation of invoices which are billed in each customer's accounts. Marketing: Courier companies rely heavily on ICT facilities for marketing and promotion of their services. Cutting edge promotional material gives the companies competitive edge. Communication: communication through e-mail and other instant messaging platforms made available through ICT have rapidly become indispensable as a business tool. ICT facilities enhance communication between the different stakeholders of the courier companies and also provide written reference of the messages. Rastrick, K., & Corner, J. (2010) noted that developments in this field have also use of generic confirmation messages to keep customers informed when the services are completed. In addition, mobile employees in the field are able to contact their counterparts in the work stations with ease. Tracking: courier companies have now adopted tracking systems that monitor and provide details of when the jobs are picked up and delivered. The tracking systems also provide a record of the individuals that accepted the delivery and strengthen the security of the packages on transit.

2.4.3 ICT-related Challenges in Courier Business

Loss of business opportunities: Courier companies globally have been robbed of potential business opportunities by the internet. In Kenya, the performance of the courier companies declined between January and May 2012 with statistics released by the Communications Commission of Kenya (CCK) indicating a downward trend in the quantities of outgoing letters. According to the third quarter statistics for the financial year 2011/2012, a downward trend in the

quantities of letters sent was recorded at 14.3 percent. Moreover, outgoing international letters experienced a 20.6 percent decline. The report cited that “the decline could be attributed to the increasing preference in the use of Internet compared to letters. Many people prefer using their computers to send mails or more so have a live chat with friends across the country or those living abroad” (Obura, 2012).

Cost of installation and maintenance of ICT infrastructure: as outlined above in the various applications of IT within the courier service industry, it is evident that there is use of systems, databases and machinery which are purchased/designed at high costs and also attract maintenance charges. In addition, most of the systems require input from IT professionals for installation and maintenance that costs courier companies substantial amounts (Khosrow-Pour, 2006). Operations disruptions: As with any other infrastructure, ICT infrastructure used in the courier industry also experiences downtimes disrupting the modus operandi of the service providers. Since most of the information is contained in ICT databases and systems, services such as tracking and billing are largely affected impairing service delivery (Sauer, 1993). In summary, despite the huge benefits that IT has accorded the business world, it still brings on some challenges and problems. Nevertheless, ICT has become an instrumental part of competitive business.

2.5 History of Document Handling Limited (DHL)

Founded in San Francisco almost 40 years ago by 3 budding entrepreneurs - Adrian Dalsey, Larry Hillblom and Robert Lynn - DHL has continued to expand at a phenomenal rate. Today, it stands tall as the global market leader of the international express and logistics industry. Back In 1969, DHL took its first small steps in building for the future by personally shipping papers by airplane from San Francisco to Honolulu. The years passed and the DHL network grew ever larger, gradually reaching out to new customers in every corner of the world. At the same time, the marketplace developed and became more complex, so DHL adapted to meet the changing needs of its customers - both at global and local level.

Today, DHL's international network links more than 220 countries and territories worldwide and employs some 300,000 employees. DHL also offers unparalleled expertise in express, air and ocean freight, overland transport, contract logistics solutions as well as international mail services. From 3 employees in 1969 to 300,000 employees in 2008, the approach and dedication has remained the same. Our success has always been based around delivering excellent service for their customers. Never complacent, DHL has become a brand acknowledged for personal commitment, proactive solutions and local strength. At the heart of its success are its employees who focus on the customer's needs and provide individually customized solutions. DHL is a Deutsche Post World Net brand. The group generated revenues of more than 63 billion Euros in 2007. The world's largest express and logistics Network DHL is the global market leader in international express, overland transport and air freight. It is also the world's number one in ocean freight and contract logistics. DHL offers a full range of customized solutions - from express document shipping to supply chain management.

2.6 Empirical Review

Field of ICT and financial performance has widely been studied by scholars. Some of the empirical studies to this regard are highlighted in subsequent paragraphs.

Murunga (2007) in his study on the impact of capital budgeting techniques on the financial performance of courier companies in Kenya aimed at establishing the capital budgeting techniques and how those techniques impact to the financial performance of courier companies in Kenya. The questionnaires in the study were distributed in 30 different courier companies in Kenya whereby only one was a state owned company i.e. Postal Corporation of Kenya while the others were privately owned by locals and foreign investors. The research adopted a causal research design that is experimental and explores the effect of one thing on another and more specifically, the effect of one variable on another. It's used to measure. What impact a specific change will have on existing norms and allows market researchers to predict hypothetical scenarios upon which a company can base its business plan. Several capital budgeting techniques were evaluated for their relationship with the firm's financial performance i.e. Return on assets and findings showed that Profitability index was highly related to the measure compared to other techniques. Methods used to assess risk analysis in capital budgeting were also evaluated e.g.

scenario analysis, sensitivity, decision tree and simulation and findings indicated that scenario analysis was used more often by managers in assessing the risk analysis. Managers also preferred using cost of equity in determining minimum rate of return for evaluating appropriate projects that the cost of debts or weighted average cost of capital. Difficulties faced in capital budgeting process were analyzed in the study and adjusting for the inflation was shown to be the most difficulty of them all. There was a significant relationship between the capital budgeting techniques and the financial performance of courier companies and therefore the project concurred with previous findings and studies.

Jeroz (2008) in his study of DHL investigated the Cost of installation and maintenance of ICT infrastructure on the various applications of IT within the courier service industry, it was evident that there is use of systems, databases and machinery which are purchased/designed at high costs and also attract maintenance charges. He observed that most of the systems required input from IT professionals for installation and maintenance that costs courier companies substantial amounts. He also observed that operations disruptions were caused by other infrastructure. He noted that ICT infrastructure used in the courier industry also experiences downtimes disrupting the modus operandi of the service providers since most of the information is contained in ICT databases and systems, services such as tracking and billing are largely affected impairing service delivery. In conclusion Jeroz reiterated that despite the huge benefits that IT has accorded the business world, it still brings on some challenges and problems.

Wafula (2010) in his study of DHL limited investigated whether momentum trading strategies are profitable as determinants of financial performance relative to the the Kenyan market, and examines the sources of such profitability. Momentum trading is significantly profitable in the intermediate term in kenya, but the profits become insignificant after risk adjustment by the Chordia and Shivakumar (2001) model. The performance specific return strategy and factor-related return strategy are analyzed to examine which portion of the total return causes profits to enter extreme levels. The Chordia and Shivakumar factor-related return strategy obtains profits with a magnitude that is close to that which is attained by the total return momentum strategy. Additional evidence further supports the view that the Chordia and Shivakumar model captures momentum profits.

Tanui(2010)in his study of data Rush limited concluded that Lending is the principal business activity for most investors is financial performance management which is typically the largest asset and the predominate source of revenue. As such, it is one of the greatest sources of risk to a investors safety and soundness. Whether due to lax credit standards, poor portfolio risk management, or weakness in the economy, loan management problems have historically been the major cause of failure or success. He also discovered that effective management of performance and the credit function is fundamental to an investor's safety and soundness. Because review of the effects of ICT on financial performance and management process is so important, Tanui concluded that it's a primary supervisory activity. Assessing the relationship between ICT and financial performance involved evaluating the steps investors management takes to identify and control risk throughout the process. The assessment focuses on what management does to identify issues before they become problems. This paper, written for the benefit of both examiners and investors discusses the elements of an effective financial management process. It emphasizes that the identification and management of risk among groups may be at least as important as the risk inherent in individual.

Muthamia (2010) on his study of financial challenges faced by DHL limited argued that when economic conditions become more challenging, organizations have fewer resources to deploy on new business or change projects and programmes, reducing the number of such initiatives they can undertake. However, at such times, the projects and programmes they do invest in are often more critical, since they may be essential to deliver efficiency savings, sustain revenue or improve aspects of performance on which the survival of the organization can depend. He was of the opinion that application of ICT could be a practical remedy for triggering innovations in the courier services sector. The current turbulent economic conditions appear to have caused increasing adoption of ICT management and production by organizations. managing a diverse range of programmes to achieve the maximum organizational value within resource and funding constraints, where 'value' does not imply only financial value and includes delivering benefits could only be achieve through advancement and incorporation of technology in courier services operations which are relevant to the organization's chosen strategic move with time.

2.7 Conclusion

It is always easier to determine the causes of the occurrences with the benefit of hindsight. Since researchers recognized the existence and need to embrace ICT for practical realization of measurable financial performance, the relationship between the two surpassed available economic theories' ability to explain them, the study of anomalies began. But when they are actually taking place, it is not easy to identify them, let alone incorporate them into pricing models. This is the benefit market speculators get for their efforts in identifying anomalies. When an anomaly gets detected, and enough arbitrageurs have made money, as the self-fulfilling prophecy foretells us, the trend disappears. Inflation causes uncertainty about the real rate of return regardless of the two factor (ICT and financial performance) being well rationally harmonized. The assumption of the equality of the lending and borrowing rates is also not correct. The relationship assumes that either asset returns are normally distributed jointly random variables, or that active and potential markets employ a quadratic form of utility. The model assumes that the variance of returns is an adequate measurement of risk. This would be implied by the assumption that returns are normally distributed, since the two ICT and financial performance don't always exhibit a direct relationship, or indeed are distributed in any two-parameter way, but for general return distributions other risk measures will reflect the active and potential performance preferences more adequately.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter specifies the nature of the research methodology that was be used in the study. The chapter adopts the following structure: research Design, target Population, data collection techniques and data analysis methods that will be followed in the research process. The period of study was four days.

3.2 Research Design

A research design can be defined as the structure of the research. It is the core of all the different aspects of any research (Kisilu & Tromp, 2006). Orodho (2003) asserts that a research design is a plan of all the conditions and elements for the collection and analysis of data in an objective manner that is in line with the research aims. It provides a framework within which research is done. In this study, a case study design was be adopted since it seeks to determine the effects of ICT on financial performance at DHL. A case study was chosen to enable the researcher gain an in-depth understanding on the effects of ICT on the financial performance of courier service providers. Kenneth (2004) observes that a case study is most appropriate where a detailed analysis of a single unit of study is desired as it provides focused and detailed insight to phenomenon that may otherwise be unclear. Mugenda and Mugenda (1999) argue that a case study is a powerful form of qualitative analysis that involves a careful and complete observation of a social unit, irrespective of what type of unit is under study. It's a method that drills down, rather than cast wide. The case study provided the researcher with in depth information, which assisted in achieving the objectives of the study.

3.3 Population of Study

Population in statistics is the specific population about which information is desired. According to Field (2005), a population is a well defined or set of people, services, elements, events, group of things or households that are being investigated. This definition ensures that population of interest is homogeneous. Population studies are more representative because everyone has equal chance to be included in the final sample that is drawn. The target population of interest in this study consisted of staff members working in the ICT and finance departments at DHL representing the top, middle and low level management that formulate policy and junior levels of the organization that implements the formulated ICT and finance policies.

3.4 Sample and Sampling Technique

According to Orodho (2003), sampling refers to the process of selecting units (e.g., people, organizations) from a population of interest so that by studying the sample we may fairly generalize our results back to the population from which they were chosen. A sample therefore is a subset of elements from a population. The researcher adopted stratified sampling technique for the research to select the sample. The technique produced estimates of overall population parameters with greater precision. The sample was stratified into top, middle and low level management and to ensure a broad perspective on supply chain visibility by the different management levels in the entire organization.

3.5 Data Collection

The study used secondary data. Secondary data was obtained from the company's financial records. A five point non-comparative Likert scale was used for the closed ended questions, the intent of the Likert was that the statement represented different aspects of the same attitude

(Brace 2004). Likert scale is simple to construct, and was easy for the respondents to read, understand and respond appropriately to the statements put across.

3.6 Validity and Reliability

According to Mugenda and Mugenda (2003), validity is the accuracy and meaningfulness of inferences, which are based on the research results. Validity per se is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study. To enhance content validity, the lecturers in the field of ICT and finance was first appraise the research instruments.

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Mugenda and Mugenda 2003). Reliability in research is influenced by random error, as random errors increase, reliability decreases. Errors may arise from inaccurate coding and ambiguous instructions to the respondents. The questionnaire used in this study was given to three independent experts in consultation with a statistician who evaluated it for face and content validity as well as for conceptual clarity and investigative bias.

3.7 Data Analysis and Presentation

A comparison of data collected with theoretical approaches and documentaries cited in the literature review was done. Further, data obtained from various respondents was compared against each other in order to get more relevant on the issues under study. Data was checked for completeness, accuracy, errors in responses, omissions and other inconsistencies. The data was coded using numerals in order to put them in limited number of categories. The data was analyzed using the Statistical Package for Social Sciences (SPSS) Version 17.0 and presented in the report in the form of tables, bar charts and graphs. Regression analysis was done to establish the relationship between the variables.

Regression Model

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + E$$

Where:-

Y = Financial performance of the company as measured by profitability.

$$\beta_0 + \beta_1 X_1 + \beta_2 X_2 + E = \text{Explained Variations of the Model.}$$

E = Unexplained Variation i.e. error term, it represents all the factors that affect the dependent variable but are not included in the model either because they are not known or difficult to measure.

X₁ = Technology Innovation as measured by new programs.

X₂ = Management of Financial information Systems measured by levels of audits and software team mate.

β_0 = Constant. It defines the level of financial performance without inclusion of predictor variables.

β_1 and β_2 = Regression Co-efficient. Define the amount by which Y is changed for every unit change of predictor variables. The significance of each of the co-efficient was tested at 95 percent level of confidence to explain the variable that explains most of the problem.

Data collected was for three years.

Bases of the model

The foundation of the model is borrowed from Murunga (2007) research where he analyzed the effect of capital budgeting techniques on financial performance of courier service providers in Kenya.

Where:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + E$$

Where

Y=Financial performance of the company

$$\beta_0 + \beta_1 X_1 + \beta_2 X_2 + E = \text{Explained variations of the model}$$

DATA ANALYSIS, PRESENTATION AND FINDINGS

4.1 Introduction

This chapter presents the quantitative analysis of secondary data obtained from DHL.

4.2 The Analytical Model

Since the study focused on one dependent variable (Financial performance of the company as measured by profitability.) and more than one independent variables, a linear regression analysis was used. The model offered the value R^2 which was used to indicate how well the model was performed. The independent variable was evaluated in terms of its predictive power of the dependant variable verses the independent variables. The linear regression model used in the study is as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \epsilon$$

Where Y is the dependent variable, Service Delivery and X_1 and X_2 are the independent variables.

Y = Financial performance of the company as measured by profitability (Dependant variable)

β_0 is the Intercept, the value of Y when X values are zero.

X_1 = Technology Innovation as measured by new programs.

X_2 = Management of Financial information Systems measured by levels of audits and software team mate.

ϵ = This is an unexplained variation i.e. error term, it represents all the factors that affect the dependent variable but are not included in the model either because they are not known or difficult to measure.

β_1, β_2 = Regression Co-efficient. Define the amount by which Y is changed for every unit change of predictor variables. The significance of each of the co-efficient will be tested at 95 percent level of confidence to explain the variable that explains most of the problem.

4.3 Strength of the model

Analysis in table 4.1 shows that the coefficient of determination (the percentage variation in the dependent variable being explained by the changes in the independent variables) R^2 equals 0.843, that is, Technology Innovation as measured by new programs and Management of Financial information Systems measured by levels of audits and software team mate, leaving only 15.7 percent unexplained. The P- value of 0.001 (Less than 0.05) implies that the model of Financial performance of the company as measured by profitability is significant at 5 percent significance level.

Table 4.1: Model Summary

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	93.144	4	23.286	79.730	.000 ^a
	Residual	53.739	56	.292		
	Total	146.884	60			

a. Predictors: (Constant), Technology Innovation as measured by new programs and Management of Financial information Systems measured by levels of audits and software team mate

b. Dependent Variable: Financial performance of the company as measured by profitability

The regression sum of squares tells us how much variability is accounted for by the regression model, which is the fitting of the least-squares line. The residual sum of squares tells us how much variability (again, not variance yet) is unaccounted for by the regression model. The total variability is the sum of both regression and residual variability. The extent to which the regression sum of squares is large relative to the residual sum of squares is the extent to which more variability than not is accounted for by the model.

ANOVA findings (P- value of 0.001) in table 4.1 show that there is correlation between the predictor's variables (Technology Innovation as measured by new programs and Management of Financial information Systems measured by levels of audits and software team mate) and

response variable (Financial performance of the company as measured by profitability). An F ratio was calculated which represented the variance between the groups, divided by the variance within the groups. A large F ratio indicates that there is more variability between the groups (caused by the independent variable) than there is within each group, referred to as the error term.

Table 4.2 : Coefficients of regression equation

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.240	.258		.930	.354
Technology Innovation	.494	.077	.297	3.798	.000
Management of Financial information Systems	.430	.070	.188	3.290	.001
Error term	.012	.000	.000	.000	.000

a. Dependent Variable: Financial performance of the company as measured by profitability

Significance level: $p < 0.001$; $N = 95$

Overall model: $F = 79.730$; $p < 0.001$; $R^2 = 0.843$; Adjusted $R^2 = 0.798$

Table 4.2 presents the measures the proportion of the variance in the dependent variable (Financial performance of the company as measured by profitability) that was explained by variations in the independent variables. In this analysis, the “Adjusted R-Square” shows that 79.8% of the variance was explained. The t ratios show the reliability of the estimate of the individual regression coefficients, in this case all the coefficients are reliable since it is a one-tailed test (at 95% confidence level).

The standard errors associated with both the intercept and the slope parameters. The standard errors provide us with a measure of how much we should expect the given sample coefficient to vary under the assumption of the null hypothesis.

The established multiple linear regression equation becomes:

$$Y = 0.240 + 0.494X_1 + 0.430X_2 + 0.012$$

4.4 Interpretation of Findings

Constant = 0.240, shows that if Technology Innovation as measured by new programs and Management of Financial information Systems measured by levels of audits and software team mate, all rated as zero, the Financial performance of the company as measured by profitability within the public sector would be at a rate of 24%

$X_1 = 0.494$, shows that one unit change in Technology Innovation results in 49.4% improvement in financial performance of the company as measured by profitability

$X_2 = 0.430$, shows that one unit change in Management of Financial information Systems measured by levels of audits and software team mate results in 43% improvement in Financial performance of the company as measured by profitability

The findings infer that technology innovation strategies contribute more to the performance of firms in the courier sector in Kenya followed by Management of Financial information Systems. At 5% level of significance and 95% level of confidence, technology innovation strategies had a 0.003 level of significance, process innovation strategies had a 0.045 level of significance, market innovations strategies showed a 0.0188 level of significant and product innovation strategies showed a 0.0267 level of significant hence the most significant factor is technology innovation strategies. The t critical at 5% level of significance at $k = 4$ degrees of freedom is 2.245. Since all t calculated values were above 2.245 then all the variables were significant in explaining the financial performance.

The results of regression model produced a constant meaning that if Technology Innovation, Management Information Systems, new program, Audits and software team mate programs were all analyzed to zero, and Financial performance as measured by ROE would be at the rate of 24%. X_1 which represented Technology Innovation was 0.294, indicating that one unit change in the level of Technology Innovation results in 29.4% units increase in financial performance as measured by ROE. X_2 which represented Management of Financial information Systems had a value of 0.230; this indicated that one unit change in Management of Financial

information Systems results to 23% unit increase in financial performance as measured by ROE. Audits which is a measure of Management of Financial information Systems which new innovations in the model produced a value 0.013, shows that a unit change in Management of Financial information Systems results in 13% unit increase in financial performance as measured by ROE. New programs is a measure of Technology Innovation represented Individual programming indices which produced a value of 0.421; this indicated that a unit changes in Technology Innovation results in 42.1% units increase in financial performance as measured by ROE. $X_2 = 0.325$, shows that a unit changes in Technology Innovation results in 0.325 units increase in Management of Financial information Systems as measured by ROE.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The aim of the study was to establish the relationship between applications of ICT on financial performance of courier service providers in Kenya. Several managerial implications follow from the results of this study. First, the findings show evidence that investments in technologies have positive payoffs when actual usage of the technology is considered.

While past studies may not have observed a positive impact in a given cross-sectional time period, the longitudinal nature of data analyzed in this study enables us to detect significant effects on various measures of courier provider financial performance.

IT managers in courier companies have struggled for ways to justify investments in technologies. To that effect, this study presents an analysis of the financial performance impacts of technologies in field setting. The methodology accounts for other contextual variables that may also impact organizational performance. This study presents evidence for the monetary impact and temporal impact due to the use of technology. Because the data analyzed were disguised by multiplying with a constant, actual estimates of monetary impacts are not possible. However, in separate analyses of the un-modified data presented to management of the courier service providers, it was straightforward to compute the impact of usage on financial performance using coefficients from the estimation models. Additionally, the results of this study suggest a temporal aspect to technology payoff; i.e., payoffs may not be realized instantaneously, but only after certain periods of time.

Also, it is possible that technology usage has a contingent impact on organizational performance. Most studies have attempted to assess the relationship between technology investments and organizational performance directly. However, the process-based approach

proposed by Soh and Markus (1995) and Weill (1992) suggests that technology's impact on organizational performance may be mediated through another variable, such as usage reported in our study. Traditionally, investment in technology has been viewed as a black box and its impact on performance measured with little context. Actual usage of IT places the investment in perspective and examines the "missing link," which is often estimated through the expected use. As is the case with all organizations, courier service providers benefit from quantification of the usage by justifying the IT investment, which often competes with investment in clinical technologies. A quantitative estimate of the impact of IT investment through usage can also facilitate an accurate cost-benefit analysis for future investment in IT.

5.2 Conclusion

The study concludes that adoption Information and communication technology affected the financial performance at DHL. Further, the firm employed ICT innovations such as financial management information systems and software innovations greatly affected the financial performance. Aggressive use of ICT contributed to the firm's profitability.

Secondly, the study concludes that ICT innovations such as Development and implementation of unique software contributed to the firm's profitability. Product development was important in both the supply of the core product as well as in the support part of any offer.

In addition, the study concludes that process innovation strategies such reduction of costs contributed to the firm's profitability and conformance to regulations contributed to the firm's profitability. Use of technology innovation promoted a friendly and helpful staff hence customer satisfaction. Innovations ensured that the services given to customers were of high quality and error free.

Technology usage had a contingent impact on organizational performance. There was also a direct relationship between technology investments and organizational performance directly. However, the process-based approach proposed revealed that technology's impact on organizational performance may be mediated through another variable, such as usage reported in our study. Investment in technology is also viewed as a black box and its impact on performance measured with little context. Actual usage of IT places the investment in perspective and examines the "missing link," which is was estimated through the expected use. As is the case

with all organizations, courier service providers benefited from quantification of the usage by justifying the IT investment, which often competes with investment in clinical technologies. A quantitative estimate of the impact of IT investment through usage also facilitate an accurate cost-benefit analysis for future investment in Information Technology.

Management in DHL courier company have struggled for ways to justify investments in technologies. To that effect, this study presents an analysis of the financial performance impacts of technologies in field setting. The methodology accounts for other contextual variables that may also impact organizational performance. The study presents evidence for the monetary impact and temporal impact due to the use of technology. Since the data analyzed were disguised by multiplying with a constant, actual estimates of monetary impacts are not possible. Considering separate analyses of the un-modified data presented to management of the courier service providers, it was straightforward to compute the impact of usage on financial performance using coefficients from the estimation models. Additionally, the results of this study suggest a temporal aspect to technology payoff; i.e., payoffs may not be realized instantaneously, but only after certain periods .

5.3 Policy Recommendations

The study recommends that the regulator in the courier sector should create an enabling environment that will enhance innovations in the firms in the sector so that they realize the full benefits of innovation strategies. The study also recommends that for all the firms in the courier sector to realize higher performance, increase number of customers, for their business to grow further and also for them to invest more they should embrace the adoption of market innovation strategies.

The study also recommends that the companies should also strive to ensure product range extension, product replacement, product improvement, product repositioning and new product introduction to enable the companies to be more productive, to grow faster, to invest more and also to earn more performance.

The study accounts for other contextual variables that may also impact organizational performance. This study presents evidence for the monetary impact and temporal impact due to the use of technology.

The study further recommends that firms in the courier sector should ensure new products introduction, reduction of costs, improved innovation process and conformance to regulations are used to influence performance of the firms under study. This will help the tap into customers' needs so well that new products generate their own source of marketing momentum.

Most studies recommended attempts to assess the relationship between technology investments and organizational performance directly. However, the process-based approach suggests that technology's impact on organizational performance may be mediated through another variable, such as usage reported in our study.

The study finally also recommends that the firms also should ensure that they adapt the new technology in order to cope with the fast changing technology. Technology innovation encourages ease of flow of information and fast delivery to the intended persons.

For efficient adoption of technology innovation strategies, there should be reliable infrastructure, enough financial resources.

5.4 Limitations of the study

This study employs data from one courier company i.e DHL, therefore, the principal limitation of this study is in the generalizability of its findings to other courier companies or other industries. This, however, is a limitation of field studies in general. On the other hand, field studies such as the one reported here have the advantage of providing a richer operationalization of reality and the ability to track detailed data over time. As such, the findings reported here cannot be generalized to the larger population of courier service providers or extended to other types of firms in other industries. However, while the results are not generalizable, the approach presented in this study can be generalized to other contexts.

The use of revenue as a measure of organizational performance has limitations because it does not take into account the costs of the business operation. Therefore, it is better viewed as a measure of organizational performance than a measure of organizational profitability. Organizations that have reliable cost information and limited charitable and bad-debt occurrence may use profitability measures as a dependent variable. To the best of knowledge, this is one of

the first studies to examine actual usage of a specific technology in a detailed and longitudinal manner.

5.5 Areas for further study

Future work in this vein should be performed and such analyses will provide the ability to detect payoffs from the actual use of technology over an extended period of time and across multiple measures of financial performance. Large sample cross-sectional studies in conjunction with longitudinal studies are called for to examine the IT payoff issue in detail and be able to make generalizations across industries, firms, etc. Actual usage of IT places the investment in perspective and examines the “missing link,” which is often estimated through the expected use. As is the case with all organizations, courier service providers benefit from quantification of the usage by justifying the IT investment, which often competes with investment in clinical technologies requiring further research.

There is need for further research on quantitative estimate of the impact of IT investment through usage which is bound to facilitate an accurate cost-benefit analysis for future investment in Information Technology. The study also recommends that the companies should also strive to ensure product range extension, product replacement, product improvement, product repositioning and new product introduction to enable the companies to be more productive, to grow faster, to invest more and also to earn more performance without putting into consideration the aspects of financing modes and element of market competition. The random selection of companies through a survey-based approach would provide the ability to make generalizations across the population of industries or firms under consideration. A comprehensive framework that remains to be tested is one that incorporates perceptual variables that reflect users’ attitudes towards technologies

REFERENCES:

- Aswathappa, K. (2006). *International Business* (2nd Ed.). New Delhi: McGraw-Hill Publishing Company.
- ALuenberger, David (1997). *Investment Science*. Oxford University Press.
- Cowles, Alfred; H. Jones (1937). "Some A Posteriori Probabilities in Stock Market Action". *Econometrica* 5 (3): 280–294.
- Fama, Eugene F.; French, Kenneth R. (1993). "Common Risk Factors in the Returns on Stocks and Bonds". *Journal of Financial Economics* 33 (1): 3–56
- Hill, L. W. C. (2003). *International Business*. New York: McGraw-Hill Publishing Company.
- Hipp, C., & Grupp, H. (2005). Innovation in the service sector: the demand for service specific innovation measurement concepts and typologies. *Research Policy*, 34, 517-535.
- John D Daniels, Lee H.Radenbaugh, Daniel P Sullivan.(2011).*International Business,Environment and Operations* (13th Ed).
- Jones, G. (1996). *The evolution of international Business: An introduction*. London: Routledge
- Khosrow-Pour, M. (2006). *Emerging trends and challenges in Information Technology*. London: Idea Group Publishing.
- Korth, C. M. (1985). *International Business: Environment and Management*. New Jersey: Prentice Hall Inc.
- othari, C. R. (2003) *Research Methodology- methods and techniques* (2nd ed). Delhi: Dharmesh Printers Ltds
- Mathis, R. L., & Jackson, J. H. (2009). *Human Resource Management: Essential Perspectives*. Ohio: Cengage Learning.

- Ministry of Information and Communications Technology Uganda. (2009). *ICT Sector Thematic Paper for the National Development Plan*. Kampala: Ministry of Information and Communications Technology-Uganda.
- Ministry of Transport-Kenya. (2010, November). *Ministry of Transport Downloads*. Retrieved July 15, 2012, from Ministry of Transport: <http://www.transport.go.ke>
- Mouelhi, R. B. (2009). Impact of the adoption of information and communication technologies on firm efficiency in the Tunisian manufacturing sector. *Economic Modelling*, 26 (2009) 961–967.
- Neill, H. F., & Drillings, M. (1994). *Motivation: Theory and Research*. New Jersey: Lawrence Erlbaum Associates.
- Obura, F. (2012, July 15). *Standard Media Life style*. Retrieved July 23, 2012, from Standard Digital: <http://www.standardmedia.co.ke/>
- Rastrick, K., & Corner, J. (2010). Understanding ICT Based Advantages: A Techno Savvy Case Study. *Interdisciplinary journal of Information, Knowledge and Management* , 5.
- Sauer, C. (1993). *Why Informations Systems Fail: A case study Approach*. Henley-on-Thames: Alfred Wailer.
- Sims, R. R. (2007). *Human Resource Management: Contemporary Issues, Challenges and Opportunities*. New York: Information Age Publishing.
- Tidd, J., Bessant, J., & Pavitt, K. (2005). *Managing Innovation: Integrating Technological, Market and Organizational Change*. West Sussex: Wiley.
- Rubinstein, Mark (2006). *A History of the Theory of Investments*. Hoboken: John Wiley & Sons, Inc.