



**FACTORS AFFECTING THE PERFORMANCE OF COMMERCIAL PRINTING
ORGANISATIONS IN UGANDA: A CASE STUDY OF THE NEW VISION
PRINTING AND PUBLISHING COMPANY LIMITED**

BY

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DECLARATION

I, **NAMARA WINIFRED**, do hereby declare that this research entitled “ **Factors Affecting Performance of Commercial Printing Organisations in Uganda**” is entirely my own original work, except where acknowledgement has been made, and that it has not been submitted before to any other University or Institution of higher learning for the award of a Degree.

Signed

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Date

APPROVAL

This dissertation has been submitted for examination with our approval as the candidate's supervisors.

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DEDICATION

I dedicate this work to the Lord, God Almighty whom by his grace all was made possible and to my parents, Mr. & Mrs. James Karaamu for the support and firm foundation they gave me.

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ACRONYMS AND ABBREVIATIONS

AAP	Association of American Publishers
AD	Anne Dominne (After Death)
BODECU	Book Development Council of Uganda
CAGR	Compound Annual Growth Rate
CTP	Computer – to – Plate
KMO	Kaiser-Meyer-Olkin
MENA	Middle East and North Africa
NAPL	National Association of Printing Leadership
NRM	National Resistance Movement
NVPPC/NVPPCL	New Vision Printing and Publishing Company Limited
PCA	Principal Component Analysis
PPDA	Public Procurement and Disposal of Assets
QWL	Quality of Working Life
SPSS	Statistical Packages for Social Scientists
UPA	Uganda Printers' Association

ABSTRACT

Commercial printing has been in existence on the globe for many centuries. In Uganda, it can be traced back to the missionaries, specifically the Church Missionary Society in the nineteenth century, who introduced it as a means of improving information flow within the local population they were Christianising. Currently, commercial printing is done at a large scale, with different commercial printing firms in the market. The purpose of this study was to investigate the factors affecting performance of commercial printing organizations in Uganda. Another aim was to find out the effect of managerial, economic and technological factors on the performance of commercial printing. A case study research design was used with both quantitative and qualitative methods. The data was collected from employees and customers of NVPPCL using mainly a self-administered questionnaire; while data analysis entailed descriptive, factor analysis, correlation and regression analysis. It was revealed that managerial factors which influenced performance were; planning, organising and controlling. Economic factors influencing performance of commercial printing were; the demand factors, economic activities and advertising. For technological factors, communication channels, innovation and automation influenced performance. The performance of commercial printing was found to include; high levels of sales, increase in profit levels and market share enjoyed by NVPPC. Positive significant correlations were found between the variable and overall managerial, economic and technological factors. These influenced performance by 46.3%, a figure which was moderate. It is recommended that managers improve on organisational monitoring and control processes and systems, foster effective leadership, ensure effective participation of employees and stakeholders in decision making, and improve on corporate image through ensuring quality outputs. They should increase market share within the neighbouring countries and also increase production techniques by importing automated machines so as improve the performance of commercial printing in Uganda.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This study examined the factors affecting the performance of commercial printing organizations with particular reference to The New Vision Printing and Publishing Company Limited (NVPPCL) in Uganda. Focus was directed on how the management system, economic and technological factors affected performance and growth of sales in commercial printing in Uganda at the NVPPCL from the year 2003 to 2008. This chapter will present the background to the problem, statement of the problem, the purpose, objectives, research questions, hypothesis, the scope, justification and significance of the study. It will also present conceptual, contextual, and theoretical background, conceptual frame work and operational definitions of key concepts.

1.1 Background

1.1 .1 Historical Background

The history of printing is bound up with the emerging democratic system in Britain – (Moran Parnell, 2006). In 868AD, the principle of using the movable printing machines and etched blocks was developed in China; but because of the vast number of characters and the lack of a phonetic alphabet, the capital costs of setting up were so great that it remained a government tool and was not used commercially or privately. In 1440, it was developed in Europe by Johannes Gutenberg, who experimented and tested his ideas in circumstances of immense difficulty caused by lack of funding, opposition and eventually poaching of his ideas.

Although Gutenberg did not invent anything, he combined existing craft techniques in a new way. The system was brought to London in 1476 by William Caxton, a wool merchant based in Belgium who had gone to Cologne to learn about the new printing process and set up a press in Bruges. Like his predecessors, he found that printing did not provide sufficient income except for those who were established with rich patrons. The government of the time (the monarchy) immediately saw the danger of the spread of information which might have been subversive, As a result, printing presses were closely monitored, and had to be licensed in their early history. The link between printing and the church remained strong as the link between scribes and the church had been, with much religious material still being produced as approved by the state. When Caxton died in 1491, he bequeathed his print works to his assistant Wynkyn de Worde, who became to be known as ‘the father of Fleet Street’. He set up the first press in Fleet Street, mostly owned by bishops (reinforcing the early links between the church and printing). Whereas Caxton had been interested in printing for its scholarly possibilities, Wynkyn de Worde was a businessman and used great skill in judging what the public wanted. He printed romances and short histories, sensational broadsheets, practical and social guides and children’s books, thus continuing the rapid growth in demand for vernacular manuscripts already under way before printing arrived (Moran, 1960).

The principles that apply in designing a state-of-art performance measurement system today rely on experience gained through trial and error in the last century (Andersen&Fagerhaug, 2002). The history of performance and performance measurement starts with the history of productivity and productivity measurement, which became relevant concepts starting with the industrial revolution. From village communities, where products and services were made for every client in a labor intensive fashion, mass production gradually became possible. These extremely important transitions which truly constitute the basis of our present high living

standards, is also to blame for the less fortunate developments of productivity and performance measurement. Performance in the printing industry can be measured by tracking spoilage, efficiency, productivity, and other measurements (Craig, 2011). Performance metrics can also be established for other areas such as order entry, invoicing, and inventory. Baselines and improvement goals should be established for each metric. Metrics can be at the company, departmental, cost center, or employee level. The best implementation of performance metrics is one that is tied to incentive programs. Each employee and department should have incentive performance goals relevant to their area. The production incentive program could include efficiency, productivity, spoilage, quality, and profitability. The administrative areas could include average time to get orders into production, cost to process orders, quotes per estimator, and average time or days to invoice customers.

Across the world, over 45 trillion pages (2005 figure) are printed annually (Y&G Print Inc., 2011). In 2006, there were approximately 30,700 printing companies in the United States, accounting for \$112 billion. According to the 2006 U.S. Industry & Market Outlook by Barnes Reports, print jobs that move through the Internet made up 12.5% of the total U.S. Printing market in 2010. According to research firm Info Trend/CAP Ventures, books and newspapers are printed today using mainly the technique of offset lithography.

Morris (2008) states that the Printing Equipment Industries Association of China (PEIAC) expects Chinese printing to develop rapidly with an expected annual rate of 8% in the coming years. The National Trade Association held a conference where it highlighted print trends: digitizing, diversification, speed to market and networking. Wang Demao, the vice chairman of PEIAC, said he expected to see a rapid development in digital and inkjet printing in China. For over a decade, he said Chinese print had been experiencing a tremendous period of

growth, peaking at around 10% annually. According to the association's statistics, the total turnover of China's printing industry reached RMB 440bn (£32.5bn) in 2007. It is said to employ around 3.9 million people; spread across 100,000 printing businesses. VAT exemption on printing machines has also encouraged Chinese to buy printing equipment from China, as well as reduce on prices due to lower machine recovery cost.

Saudi Arabia's printing industry has been projected to grow by 15 percent annually, because spending on the latest printing products and equipment for corporate and personal use has remained strong (Menafn Press, 2009). The rapidly growing number of journals, periodicals and specialized magazines has also helped boost paper imports in the country to over 370,000 tons a year, leading to demand for the latest digital technologies in pre-press, color separation, design software and other printing solutions. Saudi Arabia has been a key contributor to the robust growth of the Middle East printing industry, which is expected to reach USD 7.6 billion by 2012, or 45 per cent growth from 2007 figures. There is also an increase in the number of book publications to satisfy the diverse literary demands of the country's rapidly growing population. This trend has also been impacted by growing global interest in Arabian literary works and a continuing thrust to promote the country's heritage through the publication of various cultural-oriented books.

Kayobe (2010) states that in Ghana a new technology capable of producing press-ready aluminum plates without the use of chemical processing has been introduced. Such technology was the first in Africa. More companies in Africa have now adopted this technology (NVPPCL inclusive). It is called Inkjet Computer-to-Plate system(CTP), and has been introduced in partnership with AGFA, Epson and Technova (which is India's image transfer manufacturing giant offering a full range of world-class and top of the range imaging

products for offset, digital and screen printing). The CTP system is an innovative technology that sets new standards in the cost, flexibility and speed of offset printing for small to medium format printing.

Mubatsi (2009) noted that the first printing in Uganda was done in 1895 when Rev. E. Millar of the Church Missionary Society printed the postage stamps using a typewriter; although the stamps did not look as stylish as they are today. In 1923, the Uganda Literary and Scientific Society (Uganda Society) was formed to bring together readers and writers. The Uganda Society started publishing *The Uganda Journal* in 1934 to disseminate information regarding heritage and development. The Society published various special studies such as Sir Albert Cook's "Uganda Memories (1897-1940)". *The Uganda Journal* earned good reputation throughout Africa and it inspired publication of other such academic journals in other countries. The Society, however, closed during the civil unrest in 1983 until 1994 when it was revived.

Uganda has an array of publications like newspapers and magazines (Press reference, 2010). Many of the oldest newspapers such as the *Uganda Argus*, *Weekly Topic*, *Taiifa*, *Empya*, *Sekanyolya*, *Musizi*, *Munansi*, *Star*, *Ngabo*, and *Citizen* have for unclear reasons or factors, ceased publication. However, *The New Vision*; which is the country's leading daily paper published by the New Vision Printing and Publishing Corporation, has a print run of about 40,000 copies and a readership of about 300,000 people. The company also has several local publications like *Bukedde* with a distribution of over 20,000 copies per day; *Rupiny* the Luo-language paper, *Orumuri* that is published weekly in Runyankole; and the Ateso-language paper called *Etop*. In 2002, The New Vision employed 250 full-time staff and an additional 250 as contract workers. There are over 400 vendors, who usually offer distribution services to multiple publications for commercial purposes.

Balimwikungu (2009) noted that the printing industry in Uganda has become more vibrant with increasing technological innovations, investments and new players coming on board. Currently, over 11 new players have joined the large format digital printing field, with many more in the offset and pre-press segment. Printers who stand out in innovation include Executive Printers, Super Wave Printers, Signs, Esso Graphix, and Lithocraft Investments, to mention but a few. Most printing firms have new machines and are able to print good quality work; except that competition is very high. Most consumers demand for quality; and the industry has woken up to that realization. However, the challenges associated with technological advances always impede their activities. Uganda's printing industry directly employs 7,000 people in over 380 companies. The use of the offset method of printing is widespread and the introduction of modern methods of printing has helped improve the quality of products printed. The printing industry has been growing over the past decade partly as a result of government efforts to attract investors in the country, as well as promoting the local ones. One of the efforts in place is the liberalization of the economy in which the Investment Code has given investors incentives to repatriate their profits.

Currency devaluation dramatically increases operating and capital costs as the printing industry in Uganda heavily relies on imported printing machinery. This in the long run forces printers to increase the price of printed materials in order to recover money used in buying machinery. As a result, this reduces the demand for these materials; thereby affecting performance of the printing industry. There is need for research to identify such challenges.

There are various media through which people communicate and among these television and radio have been the main means of mass communication. However, printed materials still provide the greatest source of storable news, information and knowledge known to our

planet. For instance, newspapers, magazines and books of all kinds are read and used for knowledge, information as well as entertainment. Labels are also required to tell what is inside a bottle, tin or package, what music is recorded on a disc or written on a sheet, even what program is on television. In fact, printing is linked with various aspects of our daily lives.

1.1.2 Theoretical Background

This study was guided by two theories: the Sociotechnical Systems Theory (Socio- refers to people and society; while technical refers to machines and technology). The sociotechnical theory is about the interrelatedness of the ‘social’ and ‘technical’ aspects of an organization. This theory is founded on two main principles: the interaction of socio and technical factors which create conditions for successful (or unsuccessful) organizational performance. These interactions include linear ‘cause and effect’ relationships. The consequence of mixing social with technical issues is that social does not necessarily behave like technical. People are not machines. Paradoxically, with this growing complexity and interdependence, even the technical can start to exhibit non-linear behavior (Walker *et al.*, 2007). The socio technical theory is about ‘joint optimization’. The theory reflects on certain specific methods of joint optimization in order to design organizations that exhibit open systems properties and can cope better with environmental complexity, dynamism, new technology and competition.

Printing has a long history as a craft industry and this calls for technological changes and skilled workers in the printing industry (Parnell, 2006). Three initially distinct areas of sociological theory concerning technological change are; to establish the nature of recent technological change and what drives it; to explore managers’ decision-making in relation to such changes; and thirdly, to understand how workers’ experiences of work, and their

relationships at work, have changed with these changes in technology. The sociotechnical theory was applied to the situation at NVPPCL to find out if technological and social factors have contributed to its performance.

The second theory is Henri Fayol's management theory which covers concepts that are required in business today on how to productively manage staff with the aim of controlling and planning production (Krenn, 2009). According to this theory, there are five basic ways of controlling and planning production. These are:

Planning; where management must plan and schedule every part of commercial printing processes to ensure that finished jobs tally with customers' specifications and that delivery dates are met.

Organizing; where in addition to planning a printing process, management must also make certain that all the necessary resources (raw materials, personnel, etc.) come together at the appropriate time of production.

Commanding; in which management must encourage and direct personnel activity by ensuring that every staff member knows what to do and has a job description that must be adhered to.

Coordinating; whereby management must make certain that personnel work together in a cooperative fashion. For example, printing a job should start with job confirmation and raising of the job card, sending the art work to design house, outputting plates by pre- press, printing the job on the machine and lastly finishing the job at the binding section. For a job to be completed, this order must be followed.

The last is *Controlling*; in which the managers evaluate and ensure that personnel follow management's commands. Management must put in place a system of minimizing material wastage and fraud.

1.1.3 Conceptual Background

In this study, independent variables are management, economic and technological factors.

Dependent variables are level of sales, quality of output, profitability levels and market share.

Government policy will be a moderating variable.

Technology is the usage and knowledge of techniques, crafts, systems or methods of organization in order to solve a problem or serve some purpose (Wikimedia Foundation, Inc., 2011). Technology significantly affects human as well as other animal species' ability to control and adapt to their natural environments. The human species' use of technology began with the conversion of natural resources into simple tools. Recent technological developments of the printing press, the telephone, and the Internet, have lessened physical barriers to communication and allowed humans to interact freely on a global scale. However, not all technology has been used for peaceful purposes. The development of weapons of ever-increasing destructive power has progressed throughout history, from clubs to nuclear weapons.

Rogers (2004) diffusion of Innovation theory states that there are five main attributes of innovative technologies which influence acceptance. These are relative advantage, compatibility, complexity, trial ability, and observability.

Relative advantage may be economic or non-economic, and is the degree to which an innovation is seen as superior to prior innovations fulfilling the same needs. It is positively related to acceptance (i.e., the higher the relative advantage, the higher the adoption level, and vice versa).

Compatibility is the degree to which an innovation appears consistent with existing values, past experiences, habits and needs to the potential adopter. A low level of compatibility will slow acceptance.

Complexity is the degree to which an innovation appears difficult to understand and use. The more complex an innovation, the slower its acceptance.

Trial ability is the perceived degree to which an innovation may be tried on a limited basis, and is positively related to acceptance. Trial ability can accelerate acceptance because small-scale testing reduces risk.

Observability is the perceived degree to which results of innovating are visible to others and is positively related to acceptance.

Communication channels are the means by which a source conveys a message to a receiver. Information may be exchanged through two fundamentally different, yet complementary, channels of communication. Awareness is more often obtained through the mass media,

Economic factors in this study refer to the science of utilization, distribution and consumption of services and materials. Economics is a social science that studies how society chooses to allocate its scarce resources which have alternative uses to provide goods and services for present and future consumption (World Scientific Publishing co. Pte. Ltd, n.d). Demand for printing services refers to how much (quantity) printed jobs or services are desired by buyers. The quantity demanded is the amount of a product people are willing to buy at a certain price. (Investopedia News and Articles, 2011)

McNamara (n.d) defines advertising as bringing a product (or service) to the attention of potential and current customers. Advertising is focused on one particular product or service. Thus, an advertising plan for one product might be very different from that of another

product. Advertising is typically done with signs, brochures, commercials, direct mailings or e-mail messages, personal contact, etc.

Drazan (2010) argues that most printing industry management structures are set up to provide layers of management, with each layer orbiting within its own sphere of influence and responsibilities. Everyone understands the printing industry management top layer and everyone understands that this group stands apart from the day-to-day operations and concerns itself with bottom lines and long range plans. This layered structure continues all the way down to the lowest level of the organization until it includes the lower employees that are paid hourly. Each employee has his/her function, and many levels may be needed to get the job done.

Planning is the process of thinking before doing. It determines what is to be done, how and where it is to be done, who is to do it and how results are to be evaluated. It is important for the attainment of business objectives with limited use of resources. It helps in critical appraisal of the relative merits and demerits of alternative policies. It provides the way to select the best methods for achieving predetermined targets.

Organizing is the process of dividing work into convenient tasks or duties, or grouping of such duties in the form of posts, and delegating authority to each so that work is carried out as planned. It (organizing) contributes to the efficiency of the printing industry. Through this process, the activities necessary for goal achievement are performed and duplication of activities is avoided, thereby reducing the operating cost in printing.

Controlling refers to reviewing of employees in light of target of the plan. It is exercised by agreeing upon a time for executing an activity and following up to ensure that the timing is observed. It is also established by setting target and by comparing results with what is expected. It assists management in making the necessary changes in the policies when there are deviations.

As a process, performance measurement is not simply concerned with collecting data associated with a predefined performance goal or standard (Oak Ridge Associated Universities, 2005). Performance measurement is better thought of as an overall management system; involving prevention and detection aimed at achieving conformance of the work product or service to the customers' requirements. Additionally, it is concerned with process optimization through increased efficiency and effectiveness of the process or product. These actions occur in a continuous cycle, allowing options for expansion and improvement of the work process or product as better techniques are discovered and implemented.

Measuring business performance can keep you focused on the strengths and weaknesses of your business. When you know where to focus your attention, you can use specific problem solving techniques and decision making tips to help minimize areas of weakness. The key performance indicators for a manufacturing plant as stated by Voice Marketing Inc. (2011) are; daily number of job quotes (compared to estimated daily number based on history and sales plan), daily number of orders (compared to estimated daily number based on history and sales plan), daily volume of orders (by sales volume), daily volume of orders scheduled into the plant (for production that day), the time required to complete a quote (e.g. target is 2 hours and actual is 1.5 hours to complete (and send a quote), develop a customer satisfaction scorecard (first develop a survey program to check what customers think and feel about your

performance), percentage spoilage or non-conformance to customer specifications; and much more. All the above should then be tracked weekly or monthly or yearly-to-date and compared to same period the previous year.

Voice Marketing Inc. performance measurement theory will be used in this study.

1.1.4 Contextual Background

Mubatsi (2009) noted that the first printing in Uganda was done in 1895 when Rev. E. Millar of the Church Missionary Society printed postage stamps using a typewriter; although the stamps did not look as stylish as they do today.

In 1923, the Uganda Literary and Scientific Society (Uganda Society) was formed to bring together readers and writers. The Uganda Society started publishing *The Uganda Journal* in 1934 to disseminate information regarding heritage and development. The Society published various special studies such as Sir Albert Cook's "*Uganda Memories (1897-1940)*". *The Uganda Journal* earned a good reputation throughout Africa and it inspired publication of other such academic journals in other countries. The Society, however, closed during the civil unrest in 1983 until 1994 when it was revived.

According to *The New Vision Business Brochure* (2007), the company began its operations in March 1986 after the National Resistance Movement (NRM) took power in Uganda. The New Vision Printing and Publishing Company Limited's (NVPPCL) initial line of business was the production of an English language newspaper. NVPPCL succeeded previous government-owned newspaper *Voice of Uganda* and *Uganda Times*. During the last 22 years of its existence, the company has attained growth and experience that bring each business unit to the forefront of its perspective market.

The Monitor's daily print run is 25,000 with a readership of 200,000. In 1999, the Nation Media Group of Kenya, owner of Nairobi's leading paper *The Nation*, took over *The Monitor Publications Ltd.* This brought an influx of capital and expertise to *Daily Monitor* as the Nation has been in the news industry for a much longer time. The synergy at work in this new venture is interesting and innovative. Monitor Publications also runs a Business Directory published once a year. *The Monitor Publications* also publishes several books by local authors, some of which are used as text books in Ugandan schools. The Monitor publications have 300 full-time workers and 150 part-time workers. Other papers and magazines within the commercial printing industry in Uganda include the *Sunrise*, *Ugasport*, *Citybeat*, *Entatsi*, and *Onion* among others. *The East African*, published by *The Nation Media Group*, circulates widely in Uganda's elite circles.

Sserwaniko (2009) noted that The Uganda Printers Association (UPA) was established to promote the interests of Uganda printing industry. The key achievement of UPA was the establishment of a printing course at Kyambogo University to train much needed technical labor for the industry. This was done in collaboration with BODECU (Book Development Council of Uganda). The association is currently working on procurement issues with Public Procurement and Disposal of Assets (PPDA) to ensure that a certain percentage of government printing jobs are given to local printers. The issue of tax on printing inputs especially paper is an outstanding advocacy issue. The association believes that by tax exemptions on paper, the local printing industry would favorably compete with international players. With the growing market base from neighboring countries such as Rwanda, Kenya, Tanzania, Democratic Republic of Congo, Burundi and Southern Sudan, the industry's prospects stand a test of time.

Commercial printing at *The New Vision* like many other industries continues to undergo technological changes, as computers and technology alter the manner in which work is performed. Many of the processes that were once done manually are becoming more automated. In 1999, the laying of pages which was previously done by pasting them on plate manually was done by computers and films output for plate making. In 2004, the most notable changes occurred when the company up-graded its pre-press to a computer to plate (CTP) facility. In binding, single head book stitchers were used and 80 books would be stitched in an hour. In 2002, the company bought a gang stitcher which stitches 13,000 books per hour. Computerized full color web offset printing machines were bought to speed up the printing process. The technological changes above led to the reduction in labor costs because it took a shorter time to perform an activity and quality improved tremendously.

(www.newvison.co.ug, accessed on 16th May, 2010). The table below shows how commercial printing revenue has continued to grow with time.

Table 1: Commercial printing revenue for year 2000 to 2006

Year	2003	2004	2005	2006	2007	2008
Sales Revenue in millions	2,202	3,082	3,680	4,187	4,345	5,549

Source: NVPPCL Final Accounts (2009)

From the table 1 above, it can be observed clearly that since 2003, sales revenue increased steadily. In 2008, 27.7% growth was realized and 40% in 2004. However, the factors behind this annual growth of revenue (performance) over the period are not well documented. This necessitated a study to establish the possible influencing factors towards that growth in sales. To increase on the demand for its products, NVPPCL introduced additional marketing outlets to cater primarily for magazines and to extend the shelf life of all print products. The flagship brand - *New Vision* - benefited from preplanned content-based distribution which maximized

sales returns. Special events normally held increased the sales to over 40,000 copies per day over that period. Maximized bulk sales across all vernacular papers help in achieving sales targets. Content-based distribution, radio promotion and rural market development were believed to have added to this achievement (The New Vision Company profile, 2010).

1.2 Statement of the Problem

The printing industry has changed greatly over the last decade. This has been in response to new technologies, competition from other media and demand from customers for lower costs, higher quality and more rapid response (Yew and Tan, 2005). A key technical transition has been from analogue processes to ‘digital workflows’ in which content is processed electronically. Investment in information technology (I.T.) hardware and software has been significant. Good telecommunications links have also been essential. Technical and other management changes have meant less unskilled labor. A change between physical craft skills and computer-based process control and graphic skills has been observed with shop floor staff being given greater responsibility in managing print processes.

NVPPCL has been factored as one of the leading firms in the commercial printing industry. *The New Vision* brand has been getting about 60% of all print media advertising revenue and further enjoying over 65% market share of all newspapers sold (The New vision company profile, 2010). The annual turnover for financial year 2009/08 exceeded Ushs. 35 billion and the company is among the top 40 tax payers in Uganda (Uganda Revenue Authority, 2009). Since its inception, NVPPCL has been considered one of the best performers in the industry in terms of annual turnover. It registered a 16.7% increase in sales revenue from Ushs. 3.6 billion in 2005 to Ushs. 4.2 billion in 2006 (NVPPCL final accounts 2009). Such performance trends are thought to be associated with various factors, such as management,

the economy and technology, some of which have been adopted as reforms and marketing strategies. However, little was known as to how the performance in commercial printing is related to these factors, hence the need for an investigation to establish management, economic and technological factors influence performance in commercial printing at NVPPCL.

1.3 General Objective of the Study

The objective of this study was to examine the factors that affect the performance of commercial printing organisations in Uganda with particular reference to NVPPCL.

1.4 Specific Objectives of the Study:

The study was guided by the following specific objectives:

- (i) To find out the extent to which managerial factors influence performance of commercial printing at the NVPPCL.
- (ii) To identify how technological factors affect commercial printing performance in Uganda.
- (iii) To examine the impact of Economic factors on commercial printing performance of NVPPCL.

1.5 Research Questions

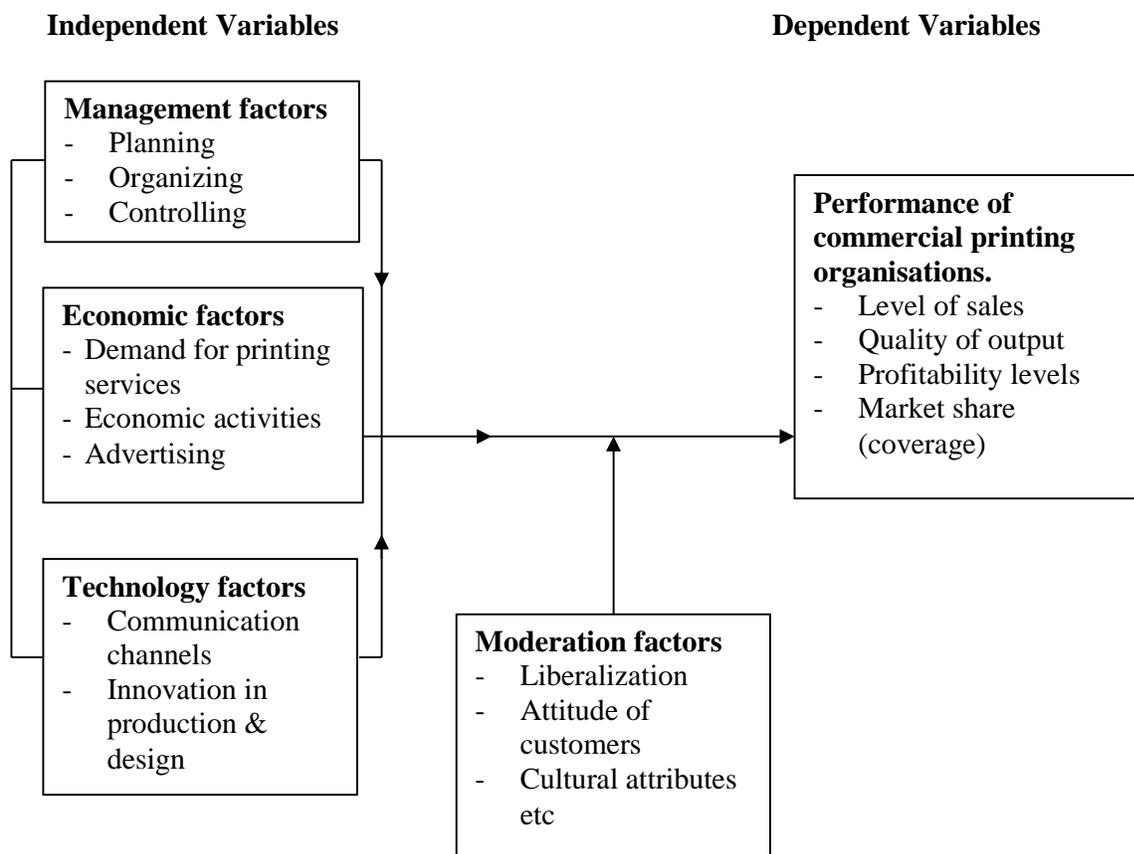
- (i) To what extent do management factors influence performance of commercial printing at NVPPCL?
- (ii) How have technological factors influenced the performance of the printing industry in Uganda?
- (iii) How do economic factors influence performance of commercial printing at the NVPPCL?

1.6 Hypotheses

- (i) Management factors significantly contribute towards performance of commercial printing.
- (ii) Technological factors positively affect the performance of the printing industry.
- (iii) There is a significant influence of economic factors on the performance of commercial printing.

1.7 Conceptual Framework

Figure 1: Conceptual Framework showing the relationship between performance of commercial printing industry and its factors.



Source: Adopted from Sociotechnical Systems Theory (Walter et al, 2007) and Fayols' management theory.

Figure 1, represents the operationalization of the study variables. The sociotechnical and Fayol's Management theories are the basis for identifying the dimensions of the independent variables (Management, Economic and technological factors), the dependent variable (performance of commercial printing) and the moderating variable (government policies). Under Management factors are planning, organizing, and controlling, anchored on Fayol's management theory. Economic factors are demand for printing services, economic activities and advertising while technological factors are communication channels and innovation in production and design. Performance which is represented by level of sales, quality output and profitability levels is the dependent variable. Commercial policies which fall under government policies are moderating variables.

Conceptually; when the independent variables of managerial, economic and technological factors become more favorable or improve over time, performance of commercial printing organization in an economy is assumed to increase sustainably.

1.8 Significance of the Study

The study will be of great help to a number of stakeholders in the following ways:

- (i) Policy makers at *The New Vision* may get answers as to how they can sustainably expand their commercial printing activities.
- (ii) It will provide literature to future researchers in the printing business and other related studies.
- (iii) It will provide information to other people in the printing industry on what strategies to adopt for competitiveness in the global markets.

1.9 Justification of the study

Ever since *The New Vision* introduced commercial printing in 1986, its performance steadily improved but the factors that could have led to its tremendous growth have never been investigated. This justified the study to bring out information in relation to what factors influence the performance of the printing industry and how each of these factors impact on the performance thereof. In Uganda, there are also a number of commercial printing organizations and this study may guide them on how to conduct their business for sustained growth and performance in key printing areas.

1.10 Scope of the Study

1.10.1 Geographical Scope

The study was carried out from NVPPCL headquarters in industrial area located on first and Second Street; while considering even all her other commercial printing business/service activities from other centers as recorded at the headquarters.

1.10.2 Time Scope

Five years were considered, that is; from 2003 to 2008. This period (2003-2008) was considered because in 2003 most of the work was done manually and the company had a two color machine. In 2004, NVPPCL purchased modern equipment like the CTP, full color printing machines, a gang stitcher and computerized Euro perfect binder. Considering this period enabled the researcher to find out whether change in technology, the economy and management had an impact on the performance of commercial printing organizations in Uganda.

1.10.3 Content Scope

The study assessed factors affecting performance of commercial printing in Uganda at the NVPPCL with greater emphasis on key possible factors of technology, economy and

management and their effect on the performance of the commercial printing industry in Uganda.

1.11 Operational Definitions of terms and concepts

The researcher used the following terms in the study.

Management - Management is the art of getting things done through people.

Technology – In this study, technology referred to development, and application of devices, machines, and techniques for manufacturing and productive processes.

Performance – Printing good quality products at minimum costs.

Digital Printing - Where the matter is prepared in a computer and the print is directly taken on a printer. It does not need any intermediate media such as plates, films etc. Printers attached to the computer directly print the text and graphics.

CTP - Computer to Plate. A process that bypasses the use of film when creating the image that is receptive to ink on the printing plate.

Film - A sheet of material that is processed with the image on it. This material is placed over the printing plate using light, burning the image into the printing plate, and determining the ink receptive areas of the plate.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter represents a critical review of both the published and unpublished literature on related theories and factors that affect performance of commercial printing firms or industries in various economies, Uganda inclusive. The literature review tackles related literature that explains how management, economic and technological factors influence performance of commercial printing organizations.

2.1 Theoretical Review

The socio-technical theory was first applied in organizations in the 1970s. It is believed that socio-technical ideas could facilitate the design of commercial printing jobs to improve human work lives. Jobs were enriched using flexible methods, empowerment strategies and new technologies. Even though many organizations applied the socio-technical theory in the past, people still have jobs that are routine, closely monitored and provide little room for personal development (Checkland and Holwell, 2004; Checkland and Scholes, 1990). Today, a complex economic environment surrounds the organizations and it has a significant impact on its performance and the way it functions in society. In order to realize production efficiency, clear specifications to goals need to be followed and control structures need to be in place.

Printing remains the prevailing technology for the dissemination of textual information despite widespread concerns about its environmental implications (Piterou, n.d). Printing technology is embedded in a sociotechnical system that includes organizational actors,

consumers and artefacts across the wide spectrum of the supply chain as well as a set of rules/practices that co-ordinate their activities (Geels, 2004). Sociotechnical systems are defined by the societal function they fulfill; in this case, textual communication. The reproduction of the existing regime poses challenges for sustainability. Due to the embedded nature of established technologies, regimes are characterized by relative stability which allows for incremental innovation. It is argued that incremental improvement of existing technologies is not sufficient to achieve sustainability goals. Instead, what is required is a major change in the way systems fulfill their societal function. These major changes are termed sociotechnical transitions and provide an understanding of technological change at a systemic level.

In the middle of the 20th century, some of the optimistic predictions of the impact of technology on business efficiency and productivity were being confounded (York University, 2010). There were many examples of the introduction of technology being associated with implementation problems often linked to resistance by the work force and a failure to achieve the expected benefits. Researchers, at the Tavistock Institute in London, with a background in the behavioral sciences (Sociology, Psychology, and Anthropology) suggested that what was needed was a fit between the technical subsystem and the social subsystem which together made up an organization. The technical subsystem comprises the devices, tools and techniques needed to transform inputs into outputs in a way which enhances the economic performance of the organization. The social system comprises the employees (at all levels) and the knowledge, skills, attitudes, values and needs they bring to the work environment as well as the reward system and authority structures that exist in the organization. Later, some authorities broadened the definitions to encompass the wider reach of the organization by including customers, suppliers, and the rules and regulations, formal and informal, which

govern the relations of the organization to society at large. This became known as the environmental subsystem. The cornerstone of the sociotechnical approach, as the work of these researchers became to be known and was achieved by a design process aiming at the joint optimization of the subsystems: any organizational system will maximize performance only if the interdependency of these subsystems is explicitly recognized. Hence any design or redesign must seek out the impact each subsystem has on the other and the design must aim at achieving superior results by ensuring that all the subsystems are working in harmony. The sociotechnical theory will be applied to the situation at NVPPCL, to find out if technology and people (staff) have contributed or affected the performance of commercial printing.

On the other hand, the classical management theory postulated by Henri Fayol will be used in this study. Grice (2011) reports on the contributions of Henri Fayol to the management discipline. Fayol's legacy is his generic Principles of Management. He thus proposed six generic activities for industrial undertakings (technical, commercial, financial, security, accounting, and managerial). In addition, he put forward five functions of management that focused on the key relationships between personnel and its management. These included: Planning – were Fayol held that this involved drawing plans that combine unity, continuity, flexibility and precision given the organization's resources, type and significance of work and future trends. He argued that by creating a plan of action is the most difficult of the five tasks as it requires the active participation of the entire organisation. Planning must be coordinated on different levels and with different time horizons.

The second function is organizing, which he held that it involved providing capital, personnel and raw materials for the day-to-day running of the business, and building a structure to match the work. Organisational structure depends entirely on the number of employees. An

increase in the number of functions expands the organisation horizontally and promotes additional layers of supervision.

The third function is commanding which Fayol noted was about optimizing returns from all employees in the interest of the entire enterprise. Successful managers have personal integrity, communicate clearly and base their judgments on regular audits. Their thorough knowledge of personnel creates unity, energy, initiative and loyalty and eliminates incompetence.

The fourth function is coordinating which involves unifying and harmonizing activities and efforts to maintain the balance between the activities of the organization, that is, sales to production and procurement to production. Fayol recommended weekly conferences for department heads to solve problems of common interest.

The last function of management is controlling; in which Fayol believed that it involves identifying weaknesses and errors by controlling feedback, and conforming activities to plans, policies and instructions. Fayol's management process went further than Taylor's basic hierarchical model by allowing command functions to operate efficiently and effectively through co-ordination and control methods. For Fayol, the managing director overlooked a living organism that requires liaison officers and joint committees.

2.2 Management Factors and Performance of commercial printing

The performance of an organization is judged on its leaders irrespective of its size. Frost (n.d) claims that the performance of every enterprise is influenced by uncontrollable factors such as weather, actions of a competitor or equipment break down. Successful leaders handle such factors through contingency planning and quick response. The three controllable factors are direction, effective execution and efficient operations. Any enterprise with these three factors in place has the capability for sustained high performance and optimum results year after

year. In the printing industry, management must ensure that they employ electrical and mechanical engineers to repair machines in case of breakdown so that client delivery expectations are met. This in the long run enables commercial printing organizations to meet their set targets and also develop a good relationship with clients.

Drucker (1993) explains that today; the importance of management from an organization's point of view has increased multifold. It is only through effective management that companies are developing and executing their business policies and strategies to maximize their profits and provide the best products and services. Management today combines creative, business, organizational, analytical and other skills to produce effective goal-oriented results. Some of the key functions in management include learning to delegate, planning and organizing, communicating clearly, controlling situations, motivating employees, adapting to change, constantly innovating and thinking of new ideas, building a good team and delivering results which are not just figure –bound; but results that also focus on overall growth and development . Management focuses on the entire organization from both a short and a long-term perspective. For commercial printing organizations to remain in business, they must plan and delegate; so that the production process does not stop. They must also be innovative due to frequent changes in customer taste.

2.2.1 Planning and Performance of commercial printing

Planning is one of the most important project and time management techniques. Planning is preparing a sequence of action in steps to achieve some specific goal. If done effectively, it can reduce the time and effort of achieving the goal. A plan is like a map. When following a plan, you can always see how much you have progressed towards your project goal and how far you are from your destination. Knowing where you are; is essential for making good

decisions on where to go or what to do next (Time management guide, 2002). At NVPPCL, jobs are planned or scheduled so that expected delivery dates are met. Following the plan enables the company save time and many jobs can be handled in a short time hence improving performance and achieving targets in the short run.

Controlling is described in the sense that a manager must receive feedback on a process in order to make necessary adjustments. Fayol's work has stood the test of time and has been shown to be relevant and appropriate to contemporary management. Many of today's management texts including Daft (2005) have reduced the five functions to four, that is, planning, organizing, leading, and controlling. Daft's text is organized around Fayol's four functions (VectorStudy.com, 2008).

For any kind of organization to run smoothly in achieving their set goals and objectives; they need to implement management concepts Pakhare (2010). To plan for it, there are three basic management concepts that allow any organization to handle planned, tactical and set decisions. Any organization, whether new or old, whether small or big, needs to run smoothly and achieve the goals and objectives which it has set forth. Planning is the foundation area of management. It is the base upon which all the areas of management should be built. Planning requires administration to assess; where the company is presently set, and where it would be in future. It is from here that an appropriate course of action is determined and implemented to attain the company's goals and objectives. Planning is a continuous course of action. Management must organize all its resources in order to put into practice the course of action to decide what has been planned in the base function. Through this process, management can determine the inside directorial configuration; establish and maintain relationships, and also assign required resources. While determining the inside directorial configuration,

management ought to look at the different divisions or departments. They also see to the harmonization of staff, and try to find out the best way to handle the important tasks and expenditure of information within the company. Management determines the division of work according to its need. It also has to decide for suitable departments to hand over authority and responsibilities. Control includes establishing performance standards which are based on the company's objectives. It also involves evaluating and reporting of actual job performance. When these points are studied by the management, it is then necessary to compare the actual with the expected to decide on further corrective and preventive actions.

2.2.2 Controlling and Performance of commercial printing

Micheal et al (2009) states that organization controls in the printing industry are important for the strategy implementation process. Controls are necessary to help ensure that firms achieve their desired outcomes. Defined as “the formal information based.....procedures used by managers to maintain or alter patterns in an organization's activities”, controls help strategic leaders build credibility, demonstrate the value of strategies to the firm's stakeholders, promote and support strategic change. Most critically, controls provide the parameters for implementing strategies as well as the corrective actions to be taken when implementation-related adjustments are required. In the commercial printing industry, a lot of materials worth millions of dollars are used; meaning that it is a high risk area in a company. Due to this, it is essential for a company to set up a proper system of control. Controls at NVPPCL include issuing relevant documents on job completion, storing materials to avoid loss through theft or obsolesce, and conducting meetings frequently to establish whether company objectives are being met. A proper control system is vital in the printing industry and lack of it means that the performance of a company can turn bad.

Regardless of the negative connotation of the word "control", it must exist or there is no organization at all (McNamara, n.d). In its most basic form, an organization is two or more people working together to reach a goal (Whether an organization is highly bureaucratic or changing and self-organizing, the organization must exist for some reason, some purpose, some mission (implicit or explicit) -- or it isn't an organization at all. The organization must have some goal. Identifying this goal requires some form of planning, informal or formal. Reaching the goal means identifying some strategies, formal or informal. These strategies are agreed upon by members of the organization through some form of communication, formal or informal. Members then act in accordance with what they agreed to do. They may change their minds, but they need to recognize and acknowledge that they're changing their minds. Organizations often use standardized documents to ensure complete and consistent information is gathered. Documents include titles and dates to detect different versions of the document. Computers have revolutionized administrative controls through use of integrated management information systems, project management software, human resource information systems, office automation software, etc. Organizations typically require a wide range of reports, e.g., financial reports, status reports, project reports, etc. to monitor what's being done, when and how.

Controlling is a four-step process of establishing performance standards based on the firm's objectives, measuring and reporting actual performance, comparing the two, and taking corrective or preventive action as necessary (Erven, n.d). Performance standards come from the planning function. No matter how difficult, standards should be established for every important task. Although the temptation may be great, lowering standards to what has been attained is not a solution to performance problems. On the other hand, a manager needs to lower standards when they are found to be unattainable due to resource limitations and

factors external to the business. Corrective action is necessary when performance is below standards. If performance is anticipated to be below standards, preventive action must be taken to ensure that the problem does not recur. If performance is greater than or equal to standards, it is useful to reinforce behaviors that led to the acceptable performance. At NVPPCL, actual materials are compared with the estimated; and corrective action is decided to ensure that unfavorable variance (when actual materials are more than estimated) does not recur. This helps the company retain its expected profits.

2.2.3 Organizing and Performance of commercial printing

Kreklow (2006) states that the success of an organization cannot be achieved without energetic and sustained support from an organization's top managers. Organization leaders, including elected officials and executive managers, need to create and communicate a vision of how performance measures will be used and how managers, employees and stakeholders will benefit. In successful implementations, leaders motivate departments to use performance measures for management, and they sustain these efforts over time. At NVPPCL, top management regularly communicates to commercial printing staff what should be done in order to meet company objectives.

Holman (2010) points out that there are a lot of factors outside the performance management team's power that will play a critical role in the success of the performance initiative. These are factors that require support from the rest of the organization. The performance management team must have support and commitment from the CEO; a direct reporting line to executive management; access to systems, data, organizational charts, and processes; management support and full commitment from their staff; a liaison for each business unit to bridge the gap in communication and operational knowledge. Both technological and

organizational developments have a direct impact on productivity and employment at the workplace level. Productivity can be increased by investing in new technology, machinery, human resources and work organization. Many researchers and politicians have supported a broader concept for productivity, including Quality of Working life (QWL) aspects such as “sustainable high performance” (Holbeche, 2006), “sustainable productivity” (Huzzard, 2003) or “sustainable work systems” (Docherty *et al.*, 2002). The “sustainable productivity” refers to the productivity improvement that does not come at the expense of employee wellbeing.

Micheal et al (2009) found that personalization is a major marketing tool, where customer information is used to develop interactions between a business and an individual customer. Personalization is a major topic in direct mail marketing, and highly relevant to the printing industry. Vesanen believes that, so far, personalization has not been greatly used in marketing strategies of most companies. Despite tremendous potential, personalization is currently neither well-executed nor well-understood. There are two variables in the marketing personalization process, operations and objects. Operations are the tasks that need to be carried out at different stages of the personalization process. Objects are elements needed to perform operations. In services, better response rates, increased customer loyalty, satisfaction and differentiation from competitors must outweigh costs such as investing in technology, brand conflict, or risk or irritating potential customers. Companies can save a lot of money in material costs by targeting interested consumers, but the margins must be carefully weighed to determine if costs will be too high.

2.3 Economic Factors and Performance of commercial printing

Economic factors are elements within the economy of a particular state that determine the economic activity of that state and its financial stability (Danev, 2011). Such factors are inflation, employment, demand and competition. All these aspects of a national economy are studied by either macro or microeconomics and have significant importance for the growth of national economies.

As the twentieth century drew to a close, the U.S. printing and publishing industry experienced unparalleled demand for its products. Despite intense competition from the electronic media and people's scarcity of leisure time, the industry's value of shipments from the sale of newspapers, periodicals, books, and trade advertising materials climbed steadily, reaching an estimated \$184 billion dollars in 1999. Profit margins also advanced, aided by a pattern of low prices in materials costs—especially paper—and gains in worker productivity. Employment in printing and publishing had moderate growth through the decade of the 1990s, exceeding 1.5 million by 1999. However, competition and consolidation reduced the number of establishments to an estimated 62,000 in 1999 from 65,000 a decade earlier.

The primary focus of U.S printers is attending to the informational needs of the huge domestic market, but the industry is an active participant in the international economy as well; and thus is subject to global forces (US department of commerce, n.d). These critical forces include changes in technology, new opportunities in global markets, international sourcing of equipment and supplies, and increased cross-border investment. The move toward digital (electronic) technology has influenced the world's publishers as well as printers. The previous technology—analogue—was based on film, plate, and chemical processes that required intermediary operations before textual input was ready for the printing

press. Digital technology removes those intermediary activities and binds the production ties between printers and publishers more closely. The decades ahead will witness a sorting-out process that will determine which parts of the production process will be done at publishers' offices and which tasks will be accomplished at the printing plant.

Lovel (2007), states that the Indian Print Industry has undergone a revolutionary change in the last 15 years. In 1990, India initiated a process of reforms aimed at shedding protectionism and embracing liberalization of the economy. Privatization was initiated with the aim of integrating the Indian economy into the world economy. This change opened the doors for the Indian Print Industry to modernize, by investing in the latest modes of technology and machinery. The average compound annual growth rate has been higher than 12% over the last 15 years. The current annual turnover of all the components in the Indian printing industry are more than Rs.50,000 crores, which is about USD 11 Billion. Indian books, journals and printing jobs, etc. are being exported to over 120 countries of the world, both developed and developing. Indian exports of books, printed pamphlets, newspapers & periodicals, job printing and printed materials during 2004-05 was estimated to the tune of USD 550 million.

2.3.1 Demand for printing services and performance of commercial printing

Total printing revenue in the Middle East and North Africa (MENA) in 2009 reached \$5.7 billion, and is expected to increase to a total of over \$7 billion by 2015 (<http://www.pira-international.com> accessed on December 20, 2010). The region's location on the doorstep to Europe and Asia places it in an ideal situation to exploit potentially lucrative export markets. The demand for printing services in the Middle East and North Africa is expected to increase.

Printing markets are broken down by end use, print process, supply market and geographic region.

Caploe (2010) states that the Printing Industries of America hold a vital position in the economy of U.S.A because most people are literate and rely on printed material for knowledge. The Printing Industry generates a large volume of employment in U.S.A and can be ranked first in terms of economic output. The U.S Printing Industry comprises of thousands of small Printing Units which employ more than 1 million people. The industry is able to produce \$100 billion in every year. According to Jordan (2010), The Association of American Publishers (AAP) estimates that U.S.A publishers had net sales of \$23.9 billion in 2009, down from \$24.3 billion in 2008, representing a 1.8% decrease. In the last seven years, the industry had a compound annual growth rate (CAGR) of 1.1%. The above information shows that commercial printing is on the increase globally.

Kahnn (2010), states that the printing industry is constantly changing and growing and this has both positive and negative implications for those who make their living in the industry. The most notable industry trends are:

Lower costs, as digital printing capabilities increase, many printers are finding that lower overhead expenses allow them to offer customers lower prices - and that means more business and an increase in revenue. Technological advancements in the offset printing process have led to lower costs in that sector of the industry as well. Some industry experts project that the cost per page may drop as much as 10% over the course of the year.

Second is digital versus traditional printing methods. Digital technology offers the most efficient and affordable method for created printed materials while the old method of making

plates for the printing process involved cameras and photographic film. Printers can now make plates directly from digital images without relying on cameras.

Thirdly, customization has also come into play of the print industry. The ease of speed and convenience have led to a renewed interest in customized printed materials among customers. Selective binding and variable data are both key to this high level of customization.

With the above trends, there are many new opportunities for the enterprising commercial printing company, such as:

An increase in customers from all over the globe. Thanks to the Internet, printing companies can now use their website to connect with customers both near and far. Files can be digitally uploaded, payment can be remitted online and a global courier service can deliver the finished product quickly and inexpensively. This has allowed many printers to greatly increase their customer base.

Online project tracking capabilities. Many commercial printers now allow customers to monitor the status of the job through the Internet. This means that every stage of the process, from design to creation and beyond, can involve the customer and that means a greater level of satisfaction in the end.

More value-added services. Less traditional services like binding, web design and packaging are now being offered by some commercial printing companies with extremely positive response from customers.

2.3.2 Advertising and performance of commercial printing

Demand for commercial printing products depend largely on the advertising and product needs of business customers. The profitability of individual companies is closely linked to effective sales operations. Large commercial printing companies have scale advantages in purchasing materials like paper and ink, in serving large customers who have regional or national needs, and in making efficient use of expensive presses (Pira International, 2011).

Monte (2010) states that the printing industry will have to rely heavily on the Internet to survive. The latest post Printing Industry needs Internet to weather recession. It was further stated that the success of the printing industry is directly related to advertising. With advertising expenditures for 2009 predicted to decrease by a record 2.4 percent, it is assumed that the future of the printing industry is not bright unless they can find a way to use the Internet. The printing industry has been losing ground to the Internet over the years and now with the addition of the economic recession, it is suggested that the printing industry finds a way to use the Internet to get more business and supplement its print services with related Internet services to survive through the tough times. Lou Del Monte, President of Minneapolis based Internet Marketing agency TMA E-Marketing stated, "There's an old saying: 'If you can't beat them, join them.' This is especially true for those in the printing industry. The question is are there Internet marketing services they can use to get business, as well as offer clients, that would complement their print business and increase revenue?"

The future success of the printing industry is very closely tied to advertising spending (Mcilroy, 2008). With its huge reliance on advertising, the printing industry performance is good. Advertising is the engine that drives most print expenditures. According to the PIA's Ronnie Davis, advertising drives nearly 45% of print spending. At NVPPCL, the major

source of revenue from newspaper printing is through adverts. Magazines that are printed also get the bulk of their income from adverts. This means that the printing industry cannot survive without adverts.

2.3.3 Economic activities and performance of commercial printing

Overall Chinese national economic strength has increased remarkably (Printing Industry center, 2007). The development of economy, culture, press and publication, and foreign trade paired with an improved national standard of living has created widespread and diversified market needs for all sectors of the printing industry. In 2005, the Chinese economy was the third highest in the world after the United States and the European Union. The Chinese economy has grown steadily at 8 to 10% annually between 2000 and 2005. FDI also increased at a rate in excess of 10% for each year of the 21st century. Within China's controlled economy, inflation rates have been held to very modest levels, exceeding 2% only once, in 2004. With rates nearly doubling between 2001 and 2004, China's growing export activity suggests the demand expectations for print products. Beyond simply market-ready, stand-alone print work, most goods exported from the country across all industries are shipped in printed packaging, generating revenue for commercial printers and packaging firms.

Lovel (2007), states that the Indian Print Industry has undergone a revolutionary change in the last 15 years. In 1990, India initiated a process of reforms aimed at shedding protectionism and embracing liberalization of the economy. Privatization was initiated with the aim of integrating the Indian economy with the world economy. This change opened the doors for the Indian Print Industry to modernize, by investing in the latest of technology and machinery. The average compound annual growth rate has been higher than 12% over the last

15 years. The current annual turnover of all the components in the Indian printing industry is more than Rs.50, 000, approximately USD 11 Billion. Indian books, journals and printing jobs, etc. are being exported to over 120 countries of the world, both developed and developing. Indian exports of books, printed pamphlets, newspapers and periodicals, job printing and printed materials during 2004-05 was estimated to the tune of USD 550 million.

The first quarter of 2011 showed that there was growth in the printing industry. However, the profitability levels were still low due to rising material costs (Paparozzi & Vincenzino, 2011).

According to NAPL (National Association for printing leadership) Printing Business Panel:

- Sales increased by 4.3% from January through March, with 53.3% of the Panel growing and 43.7% growing at least 5.0%. In comparison, the Panel's sales fell 3.9% during the first quarter of 2010, with just 40.4% growing and just 29.4% growing 5.0% or more.
- Although the top line is now growing for the majority of the companies, the bottom line is growing for just slightly over one third. Printers are not able to raise prices to avoid a reduction in demand and an improved but still very fragile economy. Material prices are likely to continue rising faster than prices can recover costs, creating a classic profit squeeze.

2.4 Technology Factors and Performance of commercial printing

Sommer (2005) asserts that organizations today face an increasingly competitive and rapidly changing environment. A variety of factors including globalization, technological breakthroughs, rapid innovation, and deregulation have eliminated competitive barriers and forced many organizations to fundamentally reformulate how they attain competitive advantage on a level playing field. In an era of "leaner and meaner" organizations, success depends on continually improving performance by reducing costs, improving/creating new products and processes, enhancing quality and productivity, and increasing speed to market

due technology innovations. As such, all aspects of the organization must demonstrate their ability to positively impact on performance (Becker and Gerhart, 1996; King *et al*, 2001). The printing industry keeps improving its products so that it can satisfy the changing demands of customers. This may be achieved with the introduction of modern equipment so that good quality work is done in a shorter time, hence improving performance.

The printing industry in Taiwan has shifted towards a stronger integration of technologies into computer-based production capacity. A more significant role of IT personnel in the printing industry has led to a boost to factory productivity, with better integration between production costs for each department and its information processing capacity in a networked environment, thus delivering successful business results.

2.4.1 Communication channels and performance of commercial printing

Hong Kong's excellent telecommunication network is a great asset for the printing industry. Printers in Hong Kong can quickly access information from various parts of the world, an advantage of vital importance to time-sensitive jobs (Hong Kong Trade Development Council, 2008). With proximity to the mainland market and a high degree of freedom of the press, Hong Kong has attracted many international publishers/news agencies to set up regional centers. The printing industry is constantly updating its technology because the ability to catch up with new production techniques is crucial. Hong Kong printers are equipped with advanced models of laser letters, electronic color scanners, electronic page-composing systems, digital printers, automatic finishing systems and one to five-color printing machines. Many Hong Kong companies are equipped with lamination machines; die-cutting, paper-cutting, shrink-wrapping, folding, hot-stamping, and binding machines to

enable them do their production work in-house to ensure quality products. Some have also introduced computer-to-plate (CTP) systems and equipment for security printing.

The introduction of digital and Internet technologies recently has brought new printing trends that have changed the printing industry (Glazer, 2010). This has changed the way printing industries do their work in prepress, press and post press. The printing industry in Australia has met these new printing trends positively; as many have updated their workflow and production strategies to meet the changing demands. Those who have not made the changes are struggling to do so due to the growing competition by non-print and online media. There has been a growing media competition considering the fact that print advertising is driven by newspaper, magazine and periodical revenues while “the Internet is chipping away traditional media usage and communication, according to the Rochester Institute of Technology School of Print Media.

The two most common print media are newspapers and magazines, but print media also include outdoor billboards, transit posters, the yellow pages, and direct mail. Print media is important because it can reach such a large audience, and the great number of specialized publications enables businesses to focus in on a target audience with a specific set of characteristics. Print media are allowed to advertise anything, such as cigarettes, liquor, and contraceptives. However, many publications will not accept controversial adverts (First Research, 2007). Increased use of digital files, low-cost courier services, and the increased ability of modern presses to accurately reproduce digitally prescribed colors, allows printers to solicit and fulfill orders from distant customers using the Internet. Online print production management solutions can save money on reworks, late fees, and obsolete materials. Online print shops like FedEx Kinko's, Mimeo, and NowDocs specialize in printing and binding

electronically prepared materials that can be delivered overnight. Commercial printers able to invest in this technology will supplant many traditional operations.

2.4.2 Innovation in Production and Design and performance of commercial printing

The printing industry has undergone significant change with advancements in technology and the integration of printing equipment, graphic arts, technical skills and revolutionized production processes (Australia Department of Public Works, 2007). According to Innovation in commercial printing Canada, technological innovation has virtually reinvented the printing industry. The pace of innovation is the biggest challenge facing the printing industry. Companies must continually re-invest in new computer-based hardware and software as the previous year's technology becomes obsolete.

Solarsh (2002) states that in today's rapidly changing business world; commercial printers must constantly be a step ahead of their competition. Any edge they can gain over another printer puts them closer to finalizing a sale, and technology helps provide that edge. A keen awareness of their competitors and larger industry trends allows printers to see beyond their current technology and plan for tomorrow. A successful commercial printer will recognize the importance of streamlining its operation through the use of state-of-the-art presses, automation and computer-to-plate (CTP) technology. Press technology has changed dramatically over the past several years. Fortunately, press manufacturers have put the demands of printers at the forefront of their designs, recognizing the need for increased productivity and efficiency. In order to accommodate faster make-readies, press speeds and higher quality, commercial printers are acquiring these state-of-the-art presses. NVPPCL acquired a state of art magnum goss machine to enable her print 40,000 newspapers of sixty four color pages per hour to help her reach the market in a short time.

Industrial technology practitioners are under intense pressure to employ techniques that will help them maintain quality in order to remain competitive in the market place today (Wilson et al., 2005). Industrial technology educators are charged with preparing students that understand process control and quality assurance within their respective specialization. Quality assurance is the process of ensuring that a manufactured product conforms to the customer's quality specifications (Field 1996, Rizzo, 1997). The factors that define quality specifications and acceptance levels are largely implied by the intent of the printed product within a given market. For example, the paper quality of a newspaper is uniform (newsprint) as opposed to that of a leaflet (bond, Art paper, Matt etc.). It is therefore suggested that customer decision is determined by physical appearance. Bone & France (2001) state that color has a significant effect on customer decision. In the printing industry, it is common for customers to approve a sample before massive printing. The practice is defined in the "best business practices for the printing industry (2002)", a set of industry customs recently written by The National Association of Printing Leadership (NAPL) and Printing industries of America (PIA).

Corn (2010) states that the Internet and new printing processes have accelerated changes to the print industry. Digital printing has become the dominant print process. The demand for digital printers is rising because digital print allows a customer to print small quantities in a short time at lower costs. The Internet is powering new forms of digital communications that were not even thought about. From email marketing and PDF files, there are more tools that bring new creative solutions to customers. A recent study showed that print buyers are now buying 14 percent of their purchases on the Internet and print service providers predict that will grow to 50 percent in the next few years.

2.5 Conclusion

There are a number of factors affecting demand for printing globally. These include: trends in consumer spending, the state of the global economy, new technology and the speed of change. It also includes changing customer expectations, globalisation, environmental concerns, energy and fuel rapid rises with few independent suppliers globally. Printers have invested large sums of money into `new equipment` in order to hold onto their customers with little investment into the vital areas of people, training and business models. The customers' requirement is for print manufacturers to have a comprehensive investment into `all` areas, not just equipment. The economy is an extremely important factor for the printing industry in a number of ways: economic conditions have a significant impact on investment, and affects not only expenditure on advertising but on all printed material. Levels of disposable income have impact on commercial printing, as well as changes in the economy. Rising costs erode margins; fluctuation of foreign exchange rates leads to fluctuation of costs of printing raw materials and has an effect on demand if costs rise.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter contains the methodology that was used in the study. It outlines the research design, study population, sample size and selection, sampling techniques and data collection methods and instruments. It also presents pre-testing and data collection procedures and data analysis.

3.1 Research Design

This refers to the strategy to integrate the different components of the research project in a cohesive way (Trochim and Land, 1982). In this study, the researcher employed a case study research design. This case study design intended to obtain greater understanding of factors responsible for performance of commercial printing at the NVPPCL. Both qualitative and quantitative approaches were used in this study. The qualitative method aimed at promoting greater understanding (Amin, 2005) of current trends in the commercial printing industry; while the quantitative method facilitated the investigation into the relationship between the current status and the desirable state in an attempt to achieve representation and a basis for generalization of the findings on the commercial printing industry. The research investigated factors affecting performance of commercial printing industry in Uganda and their policy and management implications. The research focused on a highly quantitative approach although some necessary qualitative methods were employed in data analysis hence carrying out triangulation that offered more complete information on particular areas of the study.

As observed by Sekaran (2003), the purposes of using mixed methods were illustrated by (Green et al., 1989) who highlighted a number of major reasons. He notes that triangulation

tests the consistency of findings obtained through different instruments. In this study, triangulation increased chances to control, or at least assess, some of the threats or multiple cases influencing the results. Further, the issue of complementarity was important to clarify and illustrate results from one method with the use of another method. Since the study involved studying the researcher's own organization, triangulation helped avoid the "back yard" effect (Amin, 2005) and created reader confidence in the accuracy of the findings.

3.2 Study Population

The total number of staff at NVPPCL was 549. They include 93 Journalists, 77 Editors, 53 Accountants, 21 sales executives (commercial printing), 5 Human Resource Staff, 12 Administrative assistants, 35 Printers, 20 Designers, 6 Pre-press staff, 22 Book Binders, 12 Machine Operators, 7 Auditors, 3 Purchasing Officers, 10 sales managers, 57 Radio officers, 28 Advertising staff, 16 TV staff, 28 Circulation officers, 10 Engineers, 5 Traffic controllers, 14 Drivers, 15 Office Assistants and some clients. Five out of seven departments were selected due to their direct involvement in commercial printing activities of the organization. There was a total of 247 employees in the five departments as the study population and they were purposively selected.

3.3 Sample Size Selection Strategies techniques

In line with Amin (2005), the Krejcie and Morgan (1970) table was used in the selection of the sample for the study. Some categories were selected using simple random sampling while others were purposively selected as shown in Table 3.1 below and comprised of the following categories of staff: 6 internal Audit, 53 Accountants, 25 Printers, 80 commercial printing, 16 Circulation, 21 sales executives, 10 book binders, 10 Engineers, 5 traffic controllers and 4 clients.

The sample size was determined using the method adopted from Krejcie and Morgan (1970) sample size table. Each department was based on its population size. The table 3.1 below shows the study sample size the researcher will use as respondents in data/information collection.

Table 3.1: Study population and sample size determined using Krejcie and Morgan (1970)

Category	Population categories	Sample Size	Sampling Technique
Accounts	53	50	Purposive sampling
Commercial Printing Sales Executives	21	21	Census
Printers	35	35	Census
Pre-Press staff	6	6	Census
Circulation	28	25	Simple random
Internal Audit	6	5	Census
Clients	50	4	Purposive sampling
Designers	20	11	Purposive sampling
Sales Managers	10	10	Census
Book Binders	22	20	Purposive sampling
Machine operators	12	12	Census
Engineers	10	10	Census
Traffic controllers	5	5	Census
Purchasing officers	3	3	Census
Total	247	217	

Source: Primary data based on Krejcie and Morgan (1970) model

Qualitative and quantitative procedures were used to offer the promise to get closer to the “whole” of a case in a way a single method of study cannot achieve (Brewerton, 2001, p.33). Probability methods, particularly the simple random sampling, were used in getting the study sample from which statistical data is collected. Generalization of findings was done using the random method. Convenience and purposive non probability methods were also used for collecting qualitative data that included opinions and perspectives of different

people on the subject. Such methods are expected to achieve sufficient responses thus making the study viable, fast and less costly (Sekaran 2003: Amin, 2005).

3.4 Data Collection Methods and Instruments

A triangulation of methods and instruments to enable both qualitative and quantitative data to be collected was used as follows:

3.4.1 Questionnaires

Under this method, questionnaires were frequently used. Both open and close ended questions were used. The close ended questions enhanced simplicity when anticipated answers were straight forward while open ended questions permitted a greater depth of response on specialized issues. Most other questions were in the five-Likert scale form to seek opinion and attitude on critical issues in the study. These were triangulated with contingency questions as follow up questions needed to get further information from relevant sub-groups only to enrich the understanding of the phenomenon being studied (Mugenda and Mugenda, 2003; Amin, 2005). The questionnaires were either hand delivered or emailed to the respondents depending on the prevailing circumstances and were asked to fill them in their convenience and return them within a given time frame.

3.4.2 Documentary Analysis

Data was also collected from NVPPCL documents and reports obtained from the company library and Accounts section. Relevant articles were downloaded from the internet to aid the study. This method provided secondary data for the study. Structured forms were used to collect secondary data from available reports as recommended by Kothari (2005, p.110).

3.4.3 Interviews

Interviewing was done using an interview guide to enable the researcher probe further in order to get in-depth information that the questionnaire may not be able to obtain. Interviews also enabled the researcher to establish rapport with strategic interviewees such as the Head of commercial printing and clarify difficult and unclear statements (Amin, 2005). The interview guide was used to obtain additional data that the questionnaire did not capture because the researcher was able to probe further and get clarification from respondents (Amin, 2005).

3.5 Validity and Reliability

According to (Mugenda and Mugenda, 2003) “reliability is the measure of the extent to which research instruments are able to provide the same results upon being tested repeatedly”. “Validity on the other hand is the appropriateness of the data generated in terms of being able to relate to population true options”.

3.5.1 Validity

The validity of each instrument was done to ensure face and content and construct validity by assuring respondents of anonymity and confidentiality of information received (Mugenda & Mugenda, 1999). Names and anything that can reveal the identity of the respondents was avoided to enable respondents provide correct unbiased information. The instruments were also reviewed by colleagues, competent persons in the area being studied and supervisors in order to assess its face, construct validity, capture relevant data and its completeness and clarity. The instruments were pre-tested with a section of the population to enable the researcher gauge its validity and make adjustments where necessary. The instruments were given to 23 experts who were asked to comment on their validity. They

rated the instruments on a scale of 1=not essential, 2=not decided and 3=essential. The Content Validity Ratio (CVR) was then calculated using Lawshe's formula. The reliability of the research instruments were measured as shown below;

$$CVR = (n - N/2) / (N/2)$$

Where; n= number of respondents indicating 'essential', N= total number of respondents. A total of 20 experts indicated that the instruments were essential thus CVR=0.74 a ratio high and above the target 0.70 as suggested by Amin (2005). This made the instruments valid and hence further used for data collection needed for accomplishing the study.

3.5.2 Reliability

The reliability of each instrument was assessed using the Cronbach's coefficient alpha to ensure that they yield acceptable or recommended equal or above 0.70. The instruments were also tested-retested to ensure reliability. This also helped in gauging respondents understanding of the instruments. The results from the testing-retesting were analyzed and corrections made where necessary. The researcher also gave the questionnaire and interview guide to colleagues, and the supervisor to review to ensure that they can be used to gather the data required to answer the research problem. The reliability analysis tests were carried out using the Cronbach Alpha coefficient method and findings are as reported in Table 3.2 below. Items measuring managerial factors generated a reliability of $\alpha=0.950$ (CL=95%, SL=0.05). For the case of economic factors, the reliability coefficient was $\alpha=0.856$ while for technology factors $\alpha=0.909$ (CL=95%, SL=0.05). Items measuring performance of commercial printing generated the highest coefficient $\alpha=0.951$. The reliability test results thus suggest that all the items and responses given were reliable for analysis thus representing the actual situation on ground.

Table 3.2: Reliability Statistics

Variable	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Managerial factors	.950	.950	16
Economic factors	.856	.922	14
Technology factors	.909	.910	10
Performance indicators	.951	.951	17

3.6 Data Collection Procedure

After proposal defense and acceptance, a letter of introduction was obtained from UMI and permission for the researcher to carry out the research at the New Vision was sought. Pre-testing of the questionnaire was done on a pilot ample of 5-10% in order to provide useful information on any amendments that were required. The purpose and benefit of the research was given to respondents at the New Vision in order to enable them appreciate the need to carry out the study. The research instruments were given to colleagues, supervisors and other competent persons in the subject of the study to provide their input before pre-testing them with selected elements of the study population.

3.7 Data Analysis

The collected data was converted into numerical codes and simplified form after which Statistical Package of Social Sciences (SPSS) version 16.0 was applied to analyze quantitative data. The data was also described where necessary and summarized using descriptive statistics that aided the description scores using few indices as recommended by Mugenda and Mugenda (1999). Editing of data was also done as soon as the completed instruments were returned by respondents. The collected data was scrutinized for any missing or inadequate information. Measures of central tendency were used to analyze demographic characteristics particularly showing frequencies and percentages.

The study used different data analysis tools. The Principle Factor Analysis method and the Regression Analysis Model as well as Correlation methods were the main analysis methods used. The former was used to extract factors which had an influence on performance of commercial printing organization. The Pearson Correlation Coefficient method was used to test the hypotheses to show the relationship between the study variables, while the regression model was instrumental in measuring the magnitude of the effects of each of the factors on dependent variables. The magnitude of variation in performance was measured by way of establishing the Coefficient of Determination (R^2).

3.8 Measurement of Variables

Each question or item was coded by giving it a number using the five-likert scale, that is, strongly agree, agree, not sure, disagree and strongly disagree numbered 1-5 accordingly. The other measures were the use of; Very Important, Somewhat Important, Not Certain, Not Important and Very Unimportant. This measurement enabled the researcher to analyze and draw conclusions from the findings easily. The measurement is suitable for measuring values and behavior related to commercial printing performance.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

4.1 Introduction

The performance of any organisation is determined by a number of factors. Over the years, the printing and publishing sector in Uganda has been growing steadily with the New Vision Printing and Publishing Corporation Ltd emerging at the top. The company is taking lead of the industry with the highest sales on the market and having a high turnover compared to other players. This study therefore sought to examine the factors behind the relatively steadily increasing performance of NVPPC.

4.1.1 Response rate

The researcher distributed 217 questionnaires to respondents. Of these, 198 were returned of which 178 were filled, 20 were not filled and 19 were not returned. Analysis considered only those which were filled (178). The response rate is as shown in the table below;

Table 4.1: Percentage of response rate

Item	Number	Percent
Returned	198	91.2
Not returned	19	8.8
Total	217	100.0

From the table 4.1, a response rate of 91.2% was obtained with 198 respondents returning the questionnaires. This was higher than what Mugenda and Mugenda (1999) proposed (50%) meaning that respondents were positive to the study. However, not all those who returned the questionnaires had answered them. Only 178 respondents had answered almost all the items

(89.9%), which was still a higher response rate for the findings to be valid as table 4.2 below illustrates.

Table 4.2: Percentage of Analysis rate

Item	Number	Percent
Filled	178	89.9
Not filled	20	10.1
Total	198	100.0

4.2 Demographic characteristics

The respondents were required to indicate and comment on the demographic characteristics so as to determine whether they were competent enough and knowledgeable to provide the required information for this study. Further, the characteristics intended to show the extent to which the commercial printing industry was composed. Characteristics measured included gender, age, period when respondents joined NVPPC, highest level of education, duration of service and the department to which the respondents belonged. The findings are as reported in the tables below.

Table 4.3: Gender distribution of respondents

Gender	Frequency	Percentage
Female	60	33.7
Male	118	66.3
Total	178	100.0

From Table 4.3, most of the respondents who participated in the study were males constituting 66.3% as compared to 33.7% females. This implies that commercial printing organisations, particularly NVPPC employ more males than females.

Table 4.4: Age distribution of respondents

Age	Frequency	Percentage
Below 20 years	1	0.6
20-30 years	63	35.4
31-40 years	81	45.5
41-50 years	28	15.7
51 and above	3	1.7
Did not respond	2	1.1
Total	178	100.0

A substantial number of respondents was more than 20 years and not more than 50 years old. Majority were between the age bracket of 31 and 40 years constituting 45.5% of the total participants and were closely followed by those in the age bracket of 20 and 30 years representing 35.4% of participants. This implies that commercial printing organisations are more interested in employing young people who are perceived to be energetic, and innovative to lead the company to higher horizons.

Table 4.5: When respondent joined NVPPC

Period	Frequency	Percentage
Before 2003	50	28.1
After 2003	125	70.2
Did not respond	3	1.7
Total	178	100.0

The findings found that most of the study participants had joined commercial printing industry after 2003 constituting 70.2% a year in which the industry was liberalised. This was the time when the market was opened up for investment attracting foreign investments.

Table 4.6: Highest level of education of respondents

Education level	Frequency	Percentage
'O' level	4	2.2
'A' level	4	2.2
Certificate	9	5.1
Diploma	17	9.6
Bachelor degree	107	60.1
Post graduate	29	16.3
Others	8	4.5
Total	178	100.0

Most of the participants had attained a bachelor's degree constituting 60.1% followed by those with at least a post graduate education constituting 16.3%. This implies that the industry and in particular NVPPC utilises the knowledge and skills of a highly educated group of people who are able to contribute to its growth and innovativeness in the industry late alone to keep the company high in the market in regard to its competitors.

Table 4. 7: Duration of service with NVPPC

Duration	Frequency	Percentage
1 – 9	139	78.1
10 – 19	30	16.9
20 – 29	4	2.2
Above 30	1	.6
Did not respond	4	2.2
Total	178	100.0

The findings in Table 4.7 further illustrate that most participants had spent not more than 10 years in the commercial printing industry (78.1%). However, a significant number 30 (16.9%) had worked in the industry for at least 19 years particularly with NVPPC. Only 1 (0.6%) was found to have worked in the company for more than thirty years. Probably, this was misinterpreted to even include time when the individual had worked in other public owned printing enterprises before liberalisation. The implication is that commercial printing

is a relatively recent development following the liberalisation and privatisation policies which were undertaken by government in 1994.

Table 4. 8: Department

Department	Frequency	Percentage
Accounts	40	22.5
Commercial printing	67	37.6
Production	31	17.4
Internal Audit	5	2.8
Procurement	2	1.1
Sales	28	15.7
Did not respond	5	2.8
Total	178	100.0

The findings in the table above reveal that most respondents were drawn from the commercial printing department constituting 37.6% followed by 22.5% from the accounts department and 17.4% from the production department. The least number of respondents were drawn from the procurement department (1.1%).

4.3 Results and findings on factors influencing performance of commercial printing

Participants' responses to the 43 items comprising managerial, technological, economic and performance measure elements were subjected to analysis. The analysis was done using both descriptive and factor analysis, with careful rotation of the items using Varimax technique. Factor analysis involved the use of the Principle Component Analysis. The analysis tested for sampling adequacy using the Kaiser-Meyer-Olkin measure (KMO) as well as the total variance.

4.3.1 Managerial factors influencing performance of commercial printing

The study examined the managerial factors which influenced the performance of commercial printing. Descriptive statistics showing mean and standard deviation were first generated. Thereafter, the responses were subjected to factor analysis as tables below illustrate.

Below are the results from the descriptive analysis. Following the Likert scale used in the study, any variable with a mean less than 2.5 indicated that the item was not important in influencing performance of commercial printing, while those whose mean was above 3.5 were considered important. The findings are as reported in Table 4.9.

Table 4.9: Descriptive Statistics on managerial factors

Items	N	Mean	Std. Deviation
Regular planning meetings	178	4.34	1.169
Broad involvement of all stakeholders in decision making	178	3.84	1.159
Extensive & consistent product assessment for decision making	178	4.50	1.043
Consistent customer feedback surveys for planning purposes	178	4.42	1.012
Market research and analysis	178	4.36	1.022
Establishing performance standards	178	4.33	1.178
Effectiveness in company operations	178	4.28	1.178
The leadership styles applied by managers	178	4.17	1.067
Team work among staff	178	4.49	1.141
Motivation and job satisfaction	178	4.40	1.032
Separation of duties among staff	178	4.13	1.214
Monitoring and supervision	178	4.24	1.171
Resource allocation and utilization	178	4.08	1.317
Taking corrective actions where necessary	178	4.13	1.255
Minimization of wastages	178	4.26	1.246
Valid N (listwise)	178		

From statistics in the table 4.9 above, all the items had a mean above 3.50 which indicated that they measured managerial factors which influenced performance of commercial printing. At least one item had a mean = 4.5 thus considered the most important items (Extensive and consistent product assessment for decision making; *mean* = 4.50). However, there were

considerable variances in the responses. The standard deviation results show that all items had SD = 1 implying response rates varied from one respondent to another and not all the respondents rated the item the same way, hence some having high scores while others had low scores.

Having obtained the descriptive statistics, the researcher further carried out data reduction with the help of factor analysis so as to load the items under factors which influenced performance of commercial printing as results in Table 4.10 below represent.

Table 4.10: Principal Component Analysis for managerial factors

Items	Factor Loading		
	1	2	3
Regular planning meetings	.817		
Broad involvement of all stakeholders in decision making	.762		
Extensive & consistent product assessment for decision making	.706		
Consistent customer feedback surveys for planning purposes	.801		
Market research and analysis	.713		
Establishing performance standards	.843		
Effectiveness in company operations		.876	
The leadership styles applied by managers		.844	
Team working among staff		.903	
Motivation and job satisfaction		.905	
Separation of duties among staff			.799
Monitoring and supervision			.884
Resource allocation and utilization			.850
Taking corrective actions were necessary			.816
Minimization of wastages			.767
KMO (Sig. 0.000)	.860	.705	.778
Total Variance	60.1%	65.14%	67.9%

(N=178)

Using the Principal Component Analysis (PCA), three factors were extracted as shown in the table below. The first principal component that was retained was labeled management planning. Factor analysis generated six principal components for this element. From the table

4.10, it is apparent that the most important management planning element is establishment of performance standards (0.843) followed by conducting of regular planning meetings among the staff (0.817), and consistent customer feedback survey for planning purposes (0.801). Under this factor, total variance was established at 60.1% with KMO = 0.860 given a significance level of 0.000. This implies that the sampling adequacy was confirmed at a high degree of statistical confidence of 95%. Four items loaded well with factor two which was labeled management organisation. This entailed the management of NVPPC to organize better its systems and processes. This was given a variance percentage of 65.14% with a sampling adequacy (KMO = 0.705) given *sig.* 0.000. Motivation and job satisfaction (0.905) as well as team work among staff (0.903) were considered the most important elements under organizing. With a total variance of 67.9% and KMO = 0.778 (*sig.* = 0.000), the third factor which was labeled management control loaded with five items of which monitoring and supervision (0.884), followed by resource allocation and utilization (0.850) and taking of corrective actions where necessary (0.816) were considered the most important elements influencing performance of NVPPC.

4.3.2 Economic factors influencing performance of commercial printing

The study measured the economic factors which influenced performance of commercial printing firms (NVPPC). A total of 14 items/questions were put to the respondents to rank them in a Likert scale of 5. The responses were then subjected to two analyses, that is; descriptive and factor analysis.

In regard to the descriptive statistics as presented in Table 4.11, items which scored a mean 3.5 were considered important while those whose mean 2.4 were not important measures

explaining the rapid change in the commercial printing, moreso in NVPPC. The results are as presented in the table below.

Table 4.11: Descriptive Statistics on economic factors

	N	Mean	Std. Deviation
Changing demand for prints and published works	178	4.19	1.225
Presence & price of other alternative products	178	3.94	1.222
The cost of raw materials and unit production	178	4.33	1.242
Level of disposable incomes among customers	178	3.96	1.168
Actual price of the products	178	4.33	1.168
Inflationary levels in the economy	178	4.25	1.210
New entrants into the printing & publishing industry	178	4.09	1.116
General performance of the economy	178	4.03	1.181
Quality assurance of products on the market	178	4.37	1.056
Sales volume	178	4.28	1.173
Number of product promotions	178	4.36	4.011
Corporate image, branding and packaging of products	178	4.28	1.240
Level of persuasion of the adverts	178	3.85	1.079
Cost of advertising	178	4.03	1.200
Valid N (list wise)	178		

The statistics in Table 4.11 demonstrate that all items scored a mean above 3.50, an indication that they all measured the variations in the rapid growth of the commercial printing industry, particularly NVPPC. The items were mainly considered to be somewhat important factors with none reported to be very important. However, there was a lot of variance in the responses. For instance, one item had an SD = 4.011 which implied that most respondents ranked the item highly (number of product promotions). This implies that the more product promotions carried out by the company, the higher it contributes and influences growth.

In order to further understand the extent and find out how the items loaded, factor analysis was carried out. This helped to reduce the data into a few factors under the economic aspects as findings in the Table 4.12 below illustrate.

Table 4.12: Principal Component Analysis for economic factors

Items	Factor Loading		
	1	2	3
Changing demand for prints and published works	.828		
Presence & price of other alternative products	.699		
The cost of raw materials and unit production	.904		
Level of disposable incomes among customers	.764		
Actual price of the products	.880		
Inflationary levels in the economy		.841	
New entrants into the printing & publishing industry		.747	
General performance of the economy		.829	
Quality assurance of products on the market		.818	
Sales volume		.828	
Corporate image, branding and packaging of products			.853
Level of persuasion of the adverts			.861
Cost of advertising			.670
KMO (Sig. 0.000)	.828	.835	.682
Total variance	66.9%	66.1%	54.8%

(N=178)

During factor analysis on the economic factors which influence performance of commercial printing, it was found that all the items scored above 0.60. The first principle component loaded well with five items with a total variance of 66.9% (KMO = 0.828, sig. 0.000). The highest factor loading on this component was 0.904; representing the cost of raw materials and unit production, followed closely by actual price of the products (0.880) and changing demand for prints and published works (0.828), thus this was labeled “demand factors”. The second principle component loaded with five items (with total variance of 66.1%, sig. 0.000) and was labeled “economic activities”. The most important element under this factor was inflationary levels in the economy (0.841) followed by general performance of the economy (0.829) and sales volume (0.828). The other remaining items (three) loaded well with factor three whose total variance was 54.8% (KMO = 0.682, sig. 0.000) and was labeled advertising factor. Corporate image, branding and packaging of products (0.853), level of persuasion of

the adverts (0.861) and cost of advertising (0.670) were considered the most important elements which directly affected performance of NVPPC.

4.3.3 Technology factors affecting performance of commercial printing

Technology was considered one of the factors which were probably influencing the performance of the commercial printing industry. This was premised on the notion that over the past two decades, a lot of innovation has taken place and in that respect, it has been extended to influence the printing industry. In this regard, ten items/questions were put forward to the respondents to rank them in terms of importance in influencing performance of NVPPC. The responses were analysed using both descriptive and factor analysis methods as illustrated in the tables below.

The descriptive statistics in Table 4.13 are measured on a 5-point Likert scale showing each item's level of importance in influencing performance of NVPPC. Items whose mean was more than 3.50 were considered important while those whose mean was below 2.4 were considered not important for explaining the change in the commercial printing, more so in NVPPC. The results are as presented below.

Table 4.13: Descriptive Statistics on technology factors

Items	N	Mean	Std. Deviation
Making customers aware of new products on the market	178	4.51	1.032
The media type used to inform customers of new products	178	4.17	.983
The public relations strategy	178	4.03	1.094
Customer care and response to any raised queries	178	4.45	1.110
Product designs, outlook and quality	178	4.54	1.023
The level of mechanisation used in printing	178	4.12	1.180
Superiority of the machines used by other competitors	178	4.06	1.322
Competitiveness in quality produced	178	4.46	1.115
Truthfulness of any information reported to the public	178	3.91	1.312
The level of automation in the printing	178	4.43	1.024
Valid N (list wise)	178		

The descriptive results in the table above indicate that all items scored a mean above 3.50 implying that they were all important in influencing performance in NVPPC. At least two items had a mean above 4.50 (making customers aware of new products on the market = 4.51 and product design, outlook and quality = 4.54), indicating that these were very important items in influencing performance. Worth noting is that the responses varied significantly from one respondent to another. The ranking also varied from one respondent to another as shown by the standard deviation in which most items had one above 1 (SD=1.00). The variation could be explained by the respondent's actual perception about the question or any other factors but at personal level.

Furthermore, the responses were tested using the factor analysis. Ten items were used to measure the technology factors. Out of these, three factors were extracted as technology aspects which influenced performance of NVPPC as results illustrate in the table 4.14 below.

Table 4.14: Principal Component Analysis for technology factors

Item	Factor Loading		
	1	2	3
Making customers aware of new products on the market	.907		
The media type used to inform customers of new products	.847		
The public relations strategy	.816		
Customer care and response to any raised queries	.906		
Product designs, outlook and quality		.895	
The level of mechanisation used in printing		.710	
Superiority of the machines used by other competitors		.785	
Competitiveness in quality produced		.900	
Truthfulness of any information reported to the public		.810	
The level of automation in the printing			.868
KMO (Sig. 0.000)	.788	.789	
Total variance	75.7%	57.9%	17.8%

(N=178)

The factor analysis results in table 4.14 show that three factors were extracted using the principal component analysis. Of these, four elements loaded well with factor one (with total variance of 75.7%, KMO = 0.788, *sig.* 0.000) and this was labeled “communication channels”. The most important elements were making customers aware of new products on the market (0.907), followed by customer care and response to any raised queries (0.906) and the public relations strategy which was the least element 0(.816).

Five elements factored well with component two whose KMO = 0.789 (*sig.* 0.000), with a total variance of 57.9%. The most important element under this factor was competitiveness in product quality (0.900) followed by product design, outlook and quality (0.895) and the least important element was the level of mechanisation used in printing (0.710). There was an emerging component with one item loading well with factor three. This element was level of automation in the printing (0.868) which was related to automation thus labeled “automation levels”.

4.3.4 Performance of commercial printing organisation

Performance in this study encompassed the level and extent to which NVPPC was combining the different factors of production more so managerial, economic and technology to lead to survival of its business ventures. It also entailed how the company was generally looked at in terms of achieving economies of scale as a leading printing and publishing company amidst the numerous firms in the industry. In this regard, NVPPC’s performance was measured on seventeen items. The responses were subjected to both descriptive and factor analysis as illustrated in the tables below.

The descriptive statistics in Table 4.15 were measured on a 5-point Likert scale showing each item's level of strength. Items whose mean was more than 3.50 indicated that the respondents agreed to the performance measure while those whose mean was below 2.4 indicated that they did not reflect the actual picture of the performance of NVPPC. The results are as presented below.

Table 4.15: Descriptive Statistics

	N	Mean	Std. Deviation
More copies of prints are sold	177	3.97	1.175
More copies of newspapers are sold than other prints	177	4.12	1.232
The number of distribution points is always increasing	177	3.91	1.149
More agents are recruited and deployed	177	3.74	1.197
Regionally, more sales are made in the central region than other areas	177	4.19	1.213
Paper quality meets with customer expectations	177	4.02	1.097
Information reported is highly trusted and reliable	177	3.77	1.127
Facts are followed up before being made public	177	3.81	1.100
Information reported is obtained from trusted sources	177	3.64	1.094
The profits generated have increased overtime	177	4.19	1.259
The company incurs less costs of production	177	3.36	1.130
The investment portfolio has increased overtime	177	4.01	1.220
The number of shareholdings has improved overtime	177	3.90	1.216
Coverage has increased throughout the country	177	4.17	1.135
Both public and private entities buy the products	177	4.31	1.071
Number of distribution points across the country has improved	177	3.97	1.068
Share of product markets extends across the borders	177	4.14	1.027
Valid N (list wise)	177		

From the table above, most items measured up to the mean of above 3.50 except for one item (company incurring less costs of production) whose mean was 3.36, meaning that most respondents were not certain. Generally, all the items had a standard deviation equal or above 1.00 thus indicating that the responses varied across the respondents with some having a high response while others moderate or fair rate. However, the descriptive results did not show the extent to which the items demonstrated performance of NVPPC.

As a result, they were subjected to Factor analysis as findings in Table 4.16 below illustrate.

Table 4.16: Principal Component Analysis for performance measures

Item	Factor Loading			
	1	2	3	4
More copies of prints are sold	.802			
More copies of newspapers are sold than other prints	.882			
The number of distribution points is always increasing	.888			
More agents are recruited and deployed	.867			
Regionally, more sales are made in central than other areas	.750			
Paper quality meets with customer expectations		.726		
Information reported is highly trusted and reliable		.788		
Facts are followed up before being made public		.874		
Information reported is obtained from trusted sources		.891		
The profits generated have increased overtime			.884	
The company incurs less costs of production			.682	
The investment portfolio has increased overtime			.889	
The number of shareholdings has improved overtime			.903	
Coverage has increased throughout the country				.910
Both public and private entities buy the products				.897
Improved number of distribution points across the country				.913
Share of product markets extends across the borders				.865
KMO (Sig. 0.000)	.842	.773	.748	.848
Total variance	70.5%	67.7%	71.3%	80.4%

(N=178)

Of the items, the first five elements loaded well with factor one given a total variance of 70.5% (KMO = .842, sig. 0.000). The most important of all was the number of distribution points which was increasing (0.888), followed by deployment and recruitment of more agents (0.867) with the least measure being more sales being made on a regional basis in which central was dominant (0.740). This factor was thus labeled level of sales.

The second factor loaded well with four items with total variance of 67.7% and KMO = 0.773 (sig. 0.000). The items included information reported being obtained from trusted sources (0.891), as well as following up all facts before being published (0.874). The least item was

paper quality meeting with customer expectations (0.726). This factor was labeled Quality Output.

Four items were found to load well with the third factor with total variance of 71.3% and KMO = 0.748 (*sig.* 0.000). The factor was labeled profit levels. All the items were loaded above 0.60 with the number of shareholdings improving over time (0.903) ranked highest followed by the increase in investment portfolio (0.889). The company incurring less costs of production was the least measure of performance (0.682). The last four items loaded well with factor four which was labelled market share with a total variance of 80.4%, and KMO = 0.848 (*sig.* 0.000). Worth noting is that all the items loaded above 0.80 with improved number of distribution points across the country (0.913) ranked high, followed by increase in coverage throughout the country (0.910).

4.4 Correlation results

In this section, results on the relationship between the elements of managerial, economic activity and technology factors and performance of NVPPC is made. Three independent variable measures were used to establish the relationship. All the three factors were found to be positively related to performance of commercial printing organisations as the table below illustrates. The regression model was also used to measure the coefficient of determination of each variable.

Table 4.17: Correlation Analysis Results (N=178)

Variables			Performance measures			
			Level of sales	Quality output	Profit levels	Market share
			.373**			
Managerial factors	Planning	Pearson Correlation	.383**	.350**	.501**	.425**
		Sig. (2-tailed)	.000	.000	.000	.000
	Organising	Pearson Correlation	.368**	.447**	.542**	.564**
		Sig. (2-tailed)	.000	.000	.000	.000
	Controlling	Pearson Correlation	.459**	.502**	.435**	.552**
		Sig. (2-tailed)	.000	.000	.000	.000
			.345**			
Economic factors	Demand factor	Pearson Correlation	.465**	.438**	.480**	.481**
		Sig. (2-tailed)	.000	.000	.000	.000
	Economic activities	Pearson Correlation	.442**	.442**	.518**	.551**
		Sig. (2-tailed)	.000	.000	.000	.000
	Advertising	Pearson Correlation	.290**	.247**	.213**	.290**
		Sig. (2-tailed)	.000	.000	.000	.000
			.452**			
Technological factors	Communication channels	Pearson Correlation	.471**	.339**	.463**	.435**
		Sig. (2-tailed)	.000	.000	.000	.000
	Innovation	Pearson Correlation	.489**	.422**	.514**	.505**
		Sig. (2-tailed)	.000	.000	.000	.000

**Correlation is significant at the 0.01 level (2-tailed)

Table 4.17 indicates that all the conceptualised variables positively and significantly influenced performance of commercial printing organisation in Uganda. All the variables have a positive sign of the correlation coefficient indicating that increases in their consideration and effectiveness say improvement in managerial, economic and technological aspects will lead to improvement or increases in performance of commercial printing. Overall advertising aspects have a limited but statistically significant relationship with performance ($r=0.345$, $sig. 0.000 < 0.01$). A summary of the hypotheses of the major variables (managerial, economic and technology) and performance of NVPPC is presented in the table below.

Table 4.18: Summary of hypotheses

Variable	Managerial (MF)	Economic (EF)	Technological (TF)	Performance (PE)
MF	1.00			
EF	.363**	1.00		
TF	.487**	.468	1.00	
PE	.373**	.345**	0.452**	1.00
Sig. = 0.000				

**Correlation is significant at the 0.01 level (2-tailed)

From the Table 4.18, a positive significant correlation was found between performance and the independent variables. For instance managerial factors were positively and significantly correlated with performance at $r=0.373$ (*sig. 0.000 < 0.01*), technological factors were positively and significantly correlated with performance at $r=0.452$ (*sig. 0.000 < 0.01*) as well as economic factors at $r=0.345$ (*sig. 0.000 < 0.01*).

Table 4.19: Regression Analysis Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
MF	.373 ^a	.139	.139	1.095	.139	453.699	1	2805	.000
EF	.345 ^b	.119	.119	1.116	.119	334.630	1	2469	.000
TF	.452 ^c	.205	.204	1.050	.205	454.410	1	1766	.000

a. Predictors: (Constant), Managerial factors

b. Predictors: (Constant), Economic factors

c. Predictors: (Constant), Technological factors

By examining the co-efficient of determination (r^2) the linear regression analysis results revealed that managerial factors account for only 13.9% in change in performance. On the part of economic factors, accounted for 11.9% of the variations while technological factors account for 20.5% of variations in performance of commercial printing organisations and the remaining percentage was due to other factors not included in the model. Further, the total of

r^2 is about 46.3% implying that these factors are said to have a moderate influence on commercial printing particularly in NVPPC.

Table 4.20: Beta Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.946	.108		8.779	.000
	MF	.221	.026	.210	8.455	.000
	EF	.239	.024	.241	9.831	.000
	TF	.244	.024	.237	10.107	.000

a. Dependent Variable: PE

From the Table 4.20, the beta coefficients confirm that managerial, economic and technology factors positively influence performance of commercial printing. The impact is moderate for instance MF positively impacts performance given $B=0.221$ (*sig. 0.000, t=8.455*), EF shows that $B=0.239$ (*sig. 0.000, t=9.831*) and TF changes performance given $B=0.244$ (*sig.0.000, t=10.107*). Furthermore, technology factors have a high impact on performance than managerial and economic.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter details a summary of key findings, discussion of findings, makes conclusions and draws recommendations from the data obtained.

5.1 Summary

The study findings revealed three managerial factors which influence performance of commercial printing in Uganda namely; management planning, organising and control. It was noted that the most important items under managerial factors were; establishing performance standards, motivation and job satisfaction and resource allocation and utilisation. The study also revealed three economic factors influencing performance which included; demand, economic activities and advertising. Most importantly, the cost of raw materials, inflationary levels in the economy and level of persuasion of the adverts had a higher rate of influence of performance of commercial printing. In addition, communication channels (making customers aware of new products on the market), innovation (with the most important being competitiveness in quality produced), and automation levels all of which constituted the technological factors influencing performance. The three variables (managerial, economic and technology) had a positively significant correlation with performance of commercial printing. The three factors were thus found to have a moderate influence of 46.3% on performance of commercial printing particularly in NVPPC while the remaining 53.7% influence is explained by other factors which were not measured in this study.

5.3 Discussion of findings

5.3.1 Managerial factors and Performance of commercial printing

The study revealed that management related factors such as planning, organising and controlling significantly influenced the performance of commercial printing organisations in particular NVPPC. This is consistent with the socio-technical theory which postulates that where complex economic environments exist coupled with good managerial aspects; a significant impact is made on the performance of any institution. It further postulates that specification of goals in this case through planning and control structures, then production efficiency is realised. Further Henri Fayol's six generic activities put managerial aspects at the forefront of influencing performance (Grice, 2011). In regard to Fayol, planning in the commercial printing organisation is instrumental in establishing goals and targets to be achieved but in a symmetrically planned environment in which unity, flexibility and precision are evidenced. Again it is within Fayol's theory that organising in the case of commercial printing allows for putting all the factors of production to proper use for better results. Similarly, Drucker (1993) was right to assert that management is an important factor which results into developing and executing business policies and strategies in order to maximise profits and provide the best products and services to the customers.

In addition, Pakhare (2010) argues that management concepts must be implemented if at all an organisation such as NVPPC is to smoothly achieve its set goals and objectives. In regard to controlling, the study findings were consistent with Daft (2005) reduced management factors from the initial six to four. Micheal et al (2009) was hence right to assert that controls are necessary if NVPPC is to ensure that it achieves its desired outcomes. It is imperative to note therefore, that proper management in which all employees are able to participate actively yields greater cohesion, team work and above all innovativeness in how things are done. A

well organised organisation is able to realise job satisfaction of employees and therefore performance is increased. For the case of NVPPC, the relatively good managerial techniques used, can be held for contributing positively to its continued performance over the years without which the story would be different. Therefore, though management aspects seem different, the failure to apply one leads to failure to achieve the others implying that all of them must be in harmony if NVPPC is to continue registering such good performance.

5.3.2 Economic factors and Performance of commercial printing

The study revealed that three aspects of economic factors were statistically positive and significant in regard to influencing performance of NVPPC over the years. The aspects were demand, economic activities and advertising. Danev (2011) argues in line to the findings that these are elements of the economy which have a bearing to the financial stability and progress of the players. Caploe commenting on the demand factor argues that as the world progresses and grows, the need for prints is increasingly becoming higher. In this argument, there has been a relative increase in the number of people demanding for prints more so newspapers a view which is also held by Kahnn (2010). In the face of NVPPC, newspapers account for over 50% of the total sales made with it having the largest sales of the leading newspaper published on a daily basis. In this regard, the increase in demand could be a significant factor accounting for its success in the printing industry. Monte (2010) holds a view that without investing in advertising, an organisation is liable to fail to meet its targets. Mcilroy (2008) is thus right to argue that the printing industry must be closely tied to advertising both as a source for more customers and revenue. This finding is not far different from this study finding as advertising was held a significant aspect contributing to the success of NVPPC. The results regarding economic activities are potential contributors to performance of NVPPC was equally documented by Printing Industry Centre (2007) of

China. Citing India as a case, Lovel (2007) assertion that economic activities like protectionism and liberalisation as well as privatisation reinforce and reignite growth, this is consistent with the case of Uganda. The call for liberalisation was thus instrumental in putting NVPPC at the forefront of the printing industry hence accelerating its performance. Therefore, to argue that economic factors are important if publishing organisations are to perform better is a true assertion.

5.3.3 Technological factors and Performance of commercial printing

It was found that technology factors such as communication channels and innovations were instrumental in contributing to the good and ever increasing performance of NVPPC. Sommer (2005) asserts that due to changes that have occurred over the years, technology has become part and parcel of the development agenda of any business. The use of new technologies on the market which sometimes requires huge investment is looked at by Becker and Gerhart (1996) as modest in terms of influencing performance of an organisation. It is on such grounds that King et al (2001) was right to state that printing organisations must invest more in technologies if they are to compete favorably a point which NVPPC has strived to achieve. Just like the Hong Kong printing companies, NVPPC has been equipped with better machines like hard and soft lamination machines, perfect binders, perfolating machines, stitching machines to mention but a few. Furthermore, the findings are consistent with Glazer (2010) assertion that of recent, printing organisations like NVPPC have adjusted to look at digital and internet technologies which has now been taken up by those involved in the industry for better competitive advantage. Unlike the First Research (2007) which states that media are allowed to advertise anything, NVPPC has maintained a record of limiting publication of information which is controversial hence making it stay in the market for such a long period. The company strives to maintain its reputation by publishing facts and the truth

hence contributing to its increased performance and taking a big share of the market. Just like Solarsh (2002) argues, NVPPC has endeavored to keep its competitive edge by being innovative. It is no wonder; that it has the most read tabloids on the market whose market share grows day after day. The issue of quality assurance has also been maintained as suggested by Field (1996) and Rizzo (1997). Therefore, the argument that technology has played a significant role regarding improvements in NVPPC is a true statement which has been proved in this research.

5.4 Conclusions

The following conclusions are derived from the findings of the study;

5.4.1 Managerial factors and performance of commercial printing

It has been observed from the results that it is important for careful consideration of a combination of managerial functions and aspects in a bid to improve performance of the organisation. Where focus is equally placed on the controlling, organising and planning functions of management, proper utilisation of resources as well as combination of required factors of production is possible. The role of management hence becomes important in making these aspects function which witnessed a change in overall performance. In regard to the publishing industry, the more commitment made to the full functioning of the three aspects, the possibility that its performance has out-grown that of its competitors thus keeping it above the market share in Uganda.

5.4.2 Economic factors and performance of commercial printing

An economic environment in which demand is high and positive to prints and published works, in which price of other alternative products fairly influence people's perceptions to

purchase such items and the role of an upheld corporate image, branding and packaging of products, keeps an organisation like NVPPC thrive above the competitors in the printing industry in Uganda. The level of new entrants has become a less threat to the survival of big companies where quality is put at the forefront hence attracting more customers instead. They are such economic aspects which have kept NVPPCL highly stationed in the market providing printing and publishing services.

5.4.3 Technology factors and performance of commercial printing

Holding onto new technology developments in terms of communication channels and innovativeness were observed as strong aspects which have kept NVPPCL perform to the expectations of Ugandans. NVPPCL has made a good public image, strived to introduce new products on the market, made efforts to design and redesign all its products as well as producing quality prints through use of highly mechanised tools and equipments. The significant level of automation has further put NVPPCL as an outstanding company striving to meet the needs of its customers hence contributing highly to its performance in general terms.

5.5 Recommendations

The following recommendations are derived from the study so as to improve on performance of commercial printing.

5.5.1 Managerial factors

- 1) There is need to further organise, monitor and control all the management process and systems so as to ensure that employees are motivated and satisfied with their jobs. This could be done by further revisiting and instituting better remuneration packages,

setting performance standards and flexible output targets as well as reviewing and designing suitable human resource structures.

- 2) Managers in the printing industry need to foster executive and effective leadership techniques particularly applying those management techniques which apply for the different organisations. This would help strengthen the managerial function to fully combine the other factors of production for better performance in the commercial printing industry.
- 3) Effective participation in decision making process by staff and stakeholders is paramount if managers can appreciate it. Encouraging employees and stakeholders to contribute towards the changes in the company increase on the product ownership as well as improving on employee's sense of belonging to the organisation hence increasing commitment which in turn improves performance not only for employees but for the organisation generally.

5.5.2 Economic factors

- 4) Managers in the printing industry like NVPPC need to further build their corporate image and public relations strategy by way of improving the quality of products on the market as well as improving customer relations. This would help in increasing the customer base thereby contributing to improved performance.
- 5) There is a general need to increase on the sales volume more especially in the local market. This would go a long way to improve on quality of outputs, the cost of the products against other competitors and regional distribution of products.
- 6) Furthermore, the printing industry needs to strive to attract market in the neighbouring economies like Kenya and Tanzania whose sales volume is higher than that in

Uganda. This would further open doors for positive competition hence better performance of the industry.

5.5.3 Technology factors

- 7) The importation and use of new production techniques and mechanisation should be improved so as to attract more readers to its products. This could be mostly done in the quality of prints.
- 8) There is also need for newer innovations in regard to prints produced and outlook of the products if more customers are to be attracted to NVPPC products. More user-friendly products as well as affordable products should be put on the market for the printing industry to perform much better.

5.6 Limitations of the study

The study though carried out successfully, there were some limitations which had to be foregone and include the following;

- 1) Literature-wise, the study was almost new in Uganda implying that little information on performance of commercial printing industry was not readily available. In overcoming the challenge, the researcher relied on external sources for literature.
- 2) Methodologically, the study was carried out with a case study of only one commercial printing press in the whole country. This means that the responses were limited to only NVPPC performance and not the other firms in the industry. However, since NVPPC has the biggest share of the market; the findings were readily triangulated to demonstrate the overall performance of the industry.
- 3) The study was almost the first of this kind in Uganda; challenges of identifying respondents were faced by the researcher. The customers of NVPPC are spread all

over the study area and not easily sampled. This was however, overcome by using the convenience sampling technique to select the customers.

- 4) Failure to obtain the desired response rate also affected the results. Not all the respondents returned the questionnaires distributed meaning that a slightly lower response than the desired was obtained. This was solved by testing for the reliability of the responses obtained hence making the responses fit for analysis.

5.7 Contributions of the study

The information generated has added to the existing body of knowledge and what is known about commercial printing in Uganda. Being a relatively new study, more information particularly on Uganda has been generated which can as well be used as a source of reference thereby instigating further research and analysis. In addition, the information generated in this study has shown the extent to which managerial, economic and technology factors contribute to the growth and rapid expansion of the commercial printing industry thus smaller firms or even investors in the sector may use the results to make investment decisions. On the part of the researcher, more knowledge has been gained thus increasing and changing the initial perception about what factors contribute to better performance of commercial printing which hence makes her a better expert to analyze and advise on investments made in the sector.

5.8 Areas for future research

The study suggests that more research should be done in the following areas;

- 1) The other factors apart from managerial, economic and technology factors which influence performance of commercial printing in Uganda.
- 2) The survival of small commercial printing firms alongside large investment companies like NVPPC.

- 3) The challenges faced by firms engaged in the commercial printing industry and how they are overcome.

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APPENDIX I
QUESTIONNAIRE

**AN EVALUATION OF THE FACTORS AFFECTING PERFORMANCE OF
COMMERCIAL PRINTING IN UGANDA: A CASE STUDY OF THE NEW VISION
PRINTING AND PUBLISHING COMPANY LIMITED**

Dear respondent,

I am a graduate student at Uganda Management Institute undertaking a degree of Master in Management Studies. In this study, I focus on finding out those factors which account for the performance of commercial printing organizations in Uganda. You well know that this is one of the industries which is performing well in terms of creating jobs, earning high profits, relatively sharing a large part of the products on the market. In this study you are required to indicate those factors which you think are contributing to this performance. I therefore, request you to spare off a few minutes of your valuable time and attempt to this questionnaire. The information you will provide will be treated with utmost confidentiality and will only be used for academic purposes. You may not include your name or physical contact. Thank you for accepting to participate in this academic research.

Yours Sincerely,

Namara Winifred
0772642503

SECTION A: Background Information

Please circle the category that best describes you.

01 Gender

a) Female

b) Male

02 Age of correspondent

a) Below 20 years

b) 20 – 30 years

c) 31 – 40 years

d) 41 – 50 years

e) 51 and above

03 Highest level of education

a) ‘O’ level

b) ‘A’ level

c) Certificate

d) Diploma

e) Bachelors degree

f) Post graduate

g) Others (specify)

04 When did you join New Vision Printing & Publication Company Limited?

a) Before 2003

b) After 2003

05 Length of service in years

a) 01 – 09

b) 10 – 19

c) 20 – 29

d) 30 and above

06 Department

a) Accounts

b) Commercial printing

c) Production

d) Internal Audit

e) Procurement

f) Sales

07 What is your current position in the organization?

SECTION B: Managerial Factors Which Influence Performance of Commercial Printing

08 There are various managerial factors which can be held to influence performance of commercial printing. You are required to rate the following factors in terms of importance as regards determining performance of New Vision Printing & Publishing Company Limited.

Very Important – 5

Somewhat Important – 4

Not Certain – 3

Not Important – 2

Very Unimportant – 1

MANAGEMENT FACTORS					
Planning					
Regular planning meetings	1	2	3	4	5
Broad involvement of all stakeholders in decision making	1	2	3	4	5
Extensive & consistent product assessment for decision making	1	2	3	4	5
Consistent customer feedback surveys for planning purposes	1	2	3	4	5
Market research and analysis	1	2	3	4	5
Establishing performance standards	1	2	3	4	5
Organizing					
Effectiveness in company operations	1	2	3	4	5
The leadership styles applied by managers	1	2	3	4	5
Team working among staff	1	2	3	4	5
Motivation and job satisfaction	1	2	3	4	5
The management techniques applied by top and senior managers	1	2	3	4	5
Controlling					
Separation of duties among staff	1	2	3	4	5
Monitoring and supervision	1	2	3	4	5
Resource allocation and utilization	1	2	3	4	5
Taking corrective actions were necessary	1	2	3	4	5
Minimization of wastages	1	2	3	4	5

Section C: Economic Factors which Influence Performance of Commercial Printing

09 There are various economic factors which account for the performance of commercial printing. You are required to rate the following factors in order of importance in influencing performance of New Vision Printing & Publishing Company Limited.

Very Important – 5

Somewhat Important – 4

Not Certain – 3

Not Important – 2

Very Unimportant – 1

ECONOMIC FACTORS

Demand factor					
Changing demand for prints and published works	1	2	3	4	5
Presence & price of other alternatives	1	2	3	4	5
The cost of raw materials and unit production	1	2	3	4	5
Level of disposable incomes among customers	1	2	3	4	5
Actual price of the products	1	2	3	4	5
Economic activities					
Inflationary levels in the economy	1	2	3	4	5
New entrants into the printing & publishing industry	1	2	3	4	5
General performance of the economy	1	2	3	4	5
Quality assurance of products on the market	1	2	3	4	5
Sales volume	1	2	3	4	5
Advertising					
Number of product promotions	1	2	3	4	5
Corporate image, branding and packaging of products	1	2	3	4	5
Level of persuasion of the adverts	1	2	3	4	5
Cost of advertising	1	2	3	4	5

Section D: Technology Factors which Influence Performance of Commercial Printing

09 Various technology factors may account for the performance of commercial printing. You are required to rate the following factors according to their importance in best explaining performance of New Vision Printing & Publishing Company Limited.

Very Important – 5

Somewhat Important – 4

Not Certain – 3

Not Important – 2

Very Unimportant – 1

TECHNOLOGICAL FACTORS

Communication Channels					
Making customers aware of new products on the market	1	2	3	4	5
The media type used to inform customers of new products	1	2	3	4	5
The public relations strategy	1	2	3	4	5
Customer care and response to any raised queries	1	2	3	4	5
Innovation					
Product designs, outlook and paper quality	1	2	3	4	5
The level of mechanization used in printing	1	2	3	4	5
Superiority of the machines used by other competitors	1	2	3	4	5
Competitiveness in quality produced	1	2	3	4	5
Truthfulness of any information reported to the public	1	2	3	4	5
The level of automation in the printing					

Section E: Performance of Commercial Printing organizations

10 Commercial printing is one of the industries which have gained popularity and recognition for making high profits, having high levels of sales, have better quality standards and above all having a steadily increasing share of products on the market. In this section, you are required to rate the performance of New Vision Printing & Publishing Company Limited using the scale below:

Strongly agree – 5

Agree – 4

Not Certain – 3

Disagree – 2

Strongly disagree – 1

Level of Sales					
More copies of prints are sold	1	2	3	4	5
More copies of newspapers are sold than other prints	1	2	3	4	5
The number of distribution points is always increasing	1	2	3	4	5
More agents are recruited and deployed	1	2	3	4	5
Regionally, more sales are made in central than other areas	1	2	3	4	5
Quality output					

Paper quality meets with customer expectation	1	2	3	4	5
Information reported is highly trusted and reliable	1	2	3	4	5
Facts are followed up before being made public	1	2	3	4	5
Information reported is obtained from trusted sources	1	2	3	4	5
Profit levels					
The profits generated have increased overtime	1	2	3	4	5
The company incurs less costs of production	1	2	3	4	5
The investment portfolio has increased overtime	1	2	3	4	5
Number of shareholdings has improved overtime	1	2	3	4	5
Market Share					
Coverage has increased throughout the country	1	2	3	4	5
Both public and private entities buy our products	1	2	3	4	5
Number of distribution points across the country has improved	1	2	3	4	5
Product market now extends across the borders	1	2	3	4	5

Thank you for your time and Cooperation

APPENDIX II
INTERVIEW GUIDE FOR KEY INFORMANTS
(MANAGERS AND HEADS OF DEPARTMENTS)

Dear respondent,

I am a graduate student at Uganda Management Institute undertaking a degree of Master in Management Studies. In this study, I focus on finding out those factors which account for the performance of commercial printing organizations in Uganda. You well know that this is one of the industries which is performing well in terms of creating jobs, earning high profits, relatively sharing a large part of the products on the market. In this study you are required to indicate those factors which you think are contributing to this performance. I therefore, request you to spare off a few minutes of your valuable time and attempt to this questionnaire. The information you will provide will be treated with utmost confidentiality and will only be used for academic purposes. You may not include your name or physical contact. Thank you for accepting to participate in this academic research.

Yours Sincerely,

Namara Winifred
0772642503

Identification

- 01 Gender _____
- 02 Interview Date _____
- 03 Interview Code _____
- 04 Interviewee Code _____
- 05 Position held _____
- 06 Duration of stay _____

07 Briefly comment on the management structures, techniques and methods used in this organization.

08 Could you attribute the managerial components named in (07) as some of those factors which contribute to performance of commercial printing organizations? What reasons support your response? *(probe for issues of planning, organizing & controlling)*

09 What are some of the economic factors which could be held accountable for the performance of commercial printing organizations? *(probe for demand factors, economic activities, & advertising issues)*

10 In your opinion, would you attribute the improving performance of commercial printing organizations to technology factors? What reasons do you attach to your response *(probe for communication improvements & innovations made)*

12 In a few words, how do you describe the performance levels of your organization? *(probe for sales volume, quality of output, profit levels and market share)*

13 What other factors do you attribute to influence performance of commercial printing organizations in Uganda? *(probe for government policies, attitude, and cultural issues among others)*

Any other comments

Thank you for your time and Cooperation

APPENDIX III
OBSERVATION GUIDE

The following observations shall be made:

Supervision and monitoring of workers	Well done	Somewhat done	Poorly Done
Technology used	High	Medium	Low
Customer care	Well done	Somewhat done	Poorly done
General operations management	Well done	Somewhat done	Poorly done
Team working	High	Medium	Low
General performance standards	Followed	Somewhat followed	Not followed
Physical expression of motivation	Highly motivated	Somewhat motivated	Poorly motivated
Separation of duties	Well done	Somewhat done	Poorly done
Minimization of wastages	Well done	Somewhat done	Poorly done
Promotions carried out	Highly done	Somewhat done	Not done
Quality assurance	High	Medium	Low
Good public relations	High	Medium	Low
Product outlook	Good	Fair	Poor
Level of automation	High	Medium	Low
Productivity levels	High	Medium	Below projected
Quality of paper used	Good	Fair	Below standard

APPENDIX IV
SAMPLING TABLE

Required Sample Size[†]								
Population Size	Confidence = 95%				Confidence = 99%			
	Margin of Error				Margin of Error			
	5.0%	3.5%	2.5%	1.0%	5.0%	3.5%	2.5%	1.0%
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	196	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763
1,000	278	440	606	906	399	575	727	943
1,200	291	474	674	1067	427	636	827	1119
1,500	306	515	759	1297	460	712	959	1376
2,000	322	563	869	1655	498	808	1141	1785
2,500	333	597	952	1984	524	879	1288	2173
3,500	346	641	1068	2565	558	977	1510	2890
5,000	357	678	1176	3288	586	1066	1734	3842
7,500	365	710	1275	4211	610	1147	1960	5165
10,000	370	727	1332	4899	622	1193	2098	6239
25,000	378	760	1448	6939	646	1285	2399	9972
50,000	381	772	1491	8056	655	1318	2520	12455
75,000	382	776	1506	8514	658	1330	2563	13583
100,000	383	778	1513	8762	659	1336	2585	14227
250,000	384	782	1527	9248	662	1347	2626	15555
500,000	384	783	1532	9423	663	1350	2640	16055
1,000,000	384	783	1534	9512	663	1352	2647	16317
2,500,000	384	784	1536	9567	663	1353	2651	16478
10,000,000	384	784	1536	9594	663	1354	2653	16560
100,000,000	384	784	1537	9603	663	1354	2654	16584
300,000,000	384	784	1537	9603	663	1354	2654	16586

Note: N is population size
S is sample size

Source: R.V. Krejcie and D. Morgan, "Determining Sample Size for Research activities"
Education and Psychological Measurement, Vol.30 No.31970, p.608.