

Journal of Information and Technology

ISSN Online 2617-3573



**The Strategic Role of Information Technology on  
Organization Financial Performance: A Case of XYZ  
Paper Industry Limited, Kenya**

**Lillian Wanjiku Kanyuga**

**ISSN: 2617-3573**

# The Strategic Role of Information Technology on Organization Financial Performance: A Case of XYZ Paper Industry Limited, Kenya

Lillian Wanjiku Kanyuga  
School of Business and Economics  
Daystar University  
Kanyikanyuga@gmail.com

*How to cite this article:* Kanyuga, L., W. (2019). The Strategic Role of Information Technology on Organization Financial Performance: A Case of XYZ Paper Industry Limited, Kenya, *Journal of Information and Technology*, 3(1), 1-14.

## Abstract

The digital revolution has given mankind the ability to treat information with mathematical precision, to transmit it at very high accuracy and to manipulate it at will. Information Technology innovations have the potential for changing the competitive game for any organization. This is because it helps to catalyze efficiency in the provision of better procedures resulting in better production and services. This study aimed at determining the strategic role of Information Technology on organization financial performance, a case of XYZ Paper Industry Limited, Kenya. The objectives were to find out the effect of Information Technology on financial performance of XYZ Paper Industry Limited and to assess the challenges facing the embracement of Information Technology XYZ Paper Industry Limited. The study used descriptive research design and used 51 who were drawn from various departments of XYZ Paper Industry Limited. The study made use of both secondary (literature review) and primary data. Primary data was collected by means of questionnaires and analysed using Statistical Package for the Social Sciences (SPSS). It was found that Information Technology plays a strategic role in the company, which results in improved financial performance of the company. A few challenges that affected the adoption of Information Technology were also highlighted such as budget of the company, government regulations, attitude of the staff, changes of Information Technology platform (obsolescence) among other were found to be challenges Information Technology faces. This research concluded that I.T indeed has a strategic role in the improvement of financial performance.

**Keywords:** *Strategic Role of Information Technology, Organization Financial Performance, XYZ Paper Industry Limited, Kenya*

## 1.1 INTRODUCTION

Information Technology (IT) has enabled organizations to strategies according to their business requirement. Other companies around the world have relied on I.T to strategies on the dynamic business environment and competition. Information Technology plays a strategic role in ensuring that the goals of the organization are achieved within the stipulated time period. I.T has ensured that companies have competitive advantage regardless of the industry that they operate in (Patterson & Rollan, 2012).

Information Technology has been used by various organizations to ensure that the performance is improved or enhanced to a greater level. Performance of the organizations could be in terms of monetary or non-monetary units that sustain the progress of the organization. I.T improves systems and efficiency of structure of the organization that in return leads to increased profitability and returns (Borjas, 2013).

Financial performance being the independent measure of how well a firm can use assets from its primary mode of business and generate revenues (Borjas, 2013), has been used by various organizations around the world to gauge the progress and the success of companies. Financial performance provides a clear indication of how the monetary resources of organizations are utilized. Organizations should embrace the use of information systems so that they can improve on the level of financial performance (Borjas, 2013). Information Technology plays a critical role in enhancing the financial performance of a firm.

Financial performance is a concern for a business as it is used to gauge the level of continuity of the business (Corbijn, 2007). This is because financial performance involves the measuring the output of a firm's policies and operations in monetary terms which are reflective of the firm's . There are various ways or methods that can be used to measure the financial performance of the company. A firm's profitability, effective management of resources, return on investments, value added operations and returns on assets are indicators of positive performance of financial progress of a company (Borjas, 2013). Profitability is the ability of a firm to generate earnings after the deduction of expenses and other costs that are incurred by the firm while effective management of resource is the firms ability to effectively and efficiently utilize its resources (Corbijn, 2007). According to Seeley (2007), returns in business refers to payments or profits obtained after a business transaction that involves expenditures and opportunity costs. The aspect of profitability and returns have been used for alongtime to gauge the financial performance of the firm and have been chosen to be used in this study.

XYZ Paper Industry Limited, Kenya was established in 1972 as a small stationery manufacturing unit making exercise books and produces products under the XYZ brand (Anor, 2011). XYZ Paper Industry Limited retains and functions from a multifaceted offices and godowns on Enterprise Road in Nairobi's Industrial Area with satisfactory room for expansion. The products that are manufactured by the company vary from different shapes and sizes depending on the needs of the consumers. The company boosts increased performance in the industry regardless of the changes in the business environment. In 1976 the company acquired Afri International Ltd, a

company that convert self-adhesive tape, as a result of financial muscles and performance in the East africa region (Omwono, 2009).

The success of the company cannot be questioned in the East africa region particularly the Kenyan market. This is due to the involvement of information systems in the operations and manufacturing processes of the company. The, self-adhesive labels, self-adhesive tapes computer stationery and technological utilities are used by company to improve success in the market (Johnson, 2012). The use of IT has played a key role in the advancement of the company at large. This is because of the constantly changing business environment. Through technology, the organization has innovated its services and products through strategic planning and controls of the resources. This is possible by the use of sophisticated IT that ensure efficiency. The use of I.T in wide application of packaging, manufacturing and marketing has enable successful financial developments of the company. This is because the IT gives the company an edge over competitors in the (Omwono, 2009). The financial developments in terms of returns and profitability has guaranted the development of the company. This has made the company to be sustainable interms of monetary terms. The eadvanced manufacturing process and modernized tools have sustained all the areas of developments of the company (Anor, 2011).

## **1.2 Problem Statement**

Financial performance is very significant to organizational growth in that the organization can use it to gauge its performane in the industry (Borjas, 2013). Information Technology has been used in handling strategic issues of the organization. This is because of the dynamic business environment that embraces the use of technology. The planning and formulation of strategies for organization have been made easier by use of technology and other related support devices and systems (Johnson, 2012).

There is a paradigm shift from manual operations to automated services in the commercial environment. There have been problem with I.T at the XYZ Paper Industry Limited which affected the monetary and non-monetry growth of the company (Omwono, 2009). This was because of constant changing technological world which render some of the staff and facilities of the company obsolete. This affected the market performance of the company in the region in terms of productions and sales.

Other emperical evidence related to the study Smith and Mckeen (2007) and Morikawa (2004) did research that is consistent with the variable of research. Smith and Mckeen (2007) also studied the effects of I.T strategy on business valuation in Australia. The aim of the research was to find out the strategic value of I.T and its inflences on the business valuation. From the findings of this research, it was concluded that I.T strategy improves the valuation of the business due to use of advanced facilities (Smith & Mckeen, 2007).

Morikawa (2004) studied the effect of I.T on performance of SMEs in Japan. The aim of the research was to find out the investment of technology and its effects of performance of japanese firms. It was concluded that I.T affect the performance of the SME's in Japan (Morikawa, 2004). However, there is no knowledge that a similar research has not been conducted in Kenya and

this therefore leaves a research gap for this study to be conducted in Nairobi, Kenya to investigate the strategic role of I.T on financial performance on a Kenyan company.

### **1.3 Objectives of the Study**

1. To find out the effect of I.T on financial performance at the XYZ Paper Industry Limited, Kenya.
2. To assess the challenges facing the embracement of I.T at the XYZ Paper Industry Limited, Kenya.

## **2.1 LITERATURE REVIEW**

Information Technology is universally regarded as an essential tool in enhancing the competitiveness of businesses and in-turn the economy of their country (Oliveira & Fraga, 2013). There is Evidence that IT has significant effects on the productivity and performance of firms regardless of the industry (Brien, 2005). The effects of I.T have been adopted by firms around the world with a wide spread usage of its facilities and platforms. The processing and manufacturing industry in Africa have been relying on I.T so as to enhance the financial benefits (Johnson, 2012). This has been based by the previous and current effects of technological advancements that have been really effective in the management and facilitation of the business operations and transactions. The frameworks of I.T has aid various African countries to improve developments and other significant sectors of the economy. The I.T has superseded the barriers that hindered trade and other business transaction among the African countries (Ventresca, 2008).

In Kenya, I.T has improved the outputs and other business developments that are significant to the economy (Grossman, 2008). The manufacturing and processing industry owe it the I.T for their developments in the industry. XYZ Paper Industry Limited has been relying on I.T for the developments of its structures and products. This is because I.T provides the company with efficient platform of conducting its business activities. XYZ Paper Industry Limited as a company has embedded I.T to its culture of innovation and differentiation as seen in its products (Bowman, 2008).

I.T is very important to the progress of the organization as it improves its structure and systems hence improve performance (Rose, 2010). I.T have been used by various organizations around the world to solve different organization problems. This is because I.T has been able to safely ensure that an organization obtain solution to their problems. A primary issue in the field of business and society over the past 25 years has been the interaction between corporate social performance and corporate financial performance (Roman & Hayibor, 204). I.T affects the financial performance of organizations in that it improves the systems and structures. This in turn improves the holistic performance of the organization including the financial performance of the company.

I.T enhances the operations and performances of companies by coming up with systems and platforms that gives the company competitive edge in the market (Burca, 2008). This shows that integration of technology is consistent to the developments as well as efficiency of the

organization. This can translate to positive effect of I.T on financial performance of a company because waste of resources, errors in analysis, mistakes in decision making among other, are eliminated resulting in cost saving. Utilization of I.T has for a long time improved both the intangible and monetary resources of the company (Wang, 2008).

Despite the benefits brought by information Technology, there are various challenges that affect the performance of I.T in the developments of the organization. Budget of the company, government regulations, attitude of the staff, changes of IT platform (obsolescence) as well as competition are among the challenges that affect I.T in organization (Rolini, 2012). These challenges hinder the growth and developments of the organization. These kind of challenges acts as stumbling block that have affected the effect of I.T on developments at the XYZ Paper Industry Limited. This is because the I.T cannot work efficiently in the organization setting.

Wang (2008) researched on the impacts of I.T on monetary performance of third party logistic firms in China. The research purpose was to examine the impact of I.T on the cash and other monetary performance of such firms. The results of the study had national interest so an intensive approach was used to ensure validity of the findings. The study used questionnaires as a tool of data collection so as to make the study successful. From the findings, it was concluded that I.T significantly improves the monetary performance of the third party logistic firms in China (Wang, 2008).

Farhanghi and Abbaspour (2010) concluded a study on the effects of I.T on organizational structure and firm's performance in Iran. The purpose of the study was to investigate how I.T affects organizational structures and performance in Iran. A positive relation was found between I.T and organization structure as well as performance. A cluster-sampling was used for this study and questionnaires were used as tools of data collection and concluded that I.T improves the organizational structures and firm's performance in various industries in Iran (Farhanghi & Abbaspour, 2010).

Also, Francalanci and Morabito (2008) conducted a study in Milan regarding the integration of I.T and business performance in the SME's. The objective of the study was to find out the effect of I.T and the business performance of the SME's in Milan, Italy. For a successful study, high performing SME's in Milan were included in the research study. The study used a combined method of interview and questionnaire as a way of data collecting procedures. It was concluded that I.T improves performance of the SME's in Milan through innovation and creativity of service (Francalanci & Morabito, 2008).

In addition, Burca (2008) did a study regarding the effects of I.T on the service practice and performance of the firms. The study was done in the east side of Paris and it involved technoserving firms. The conceptual framework for this study was developed to guide the researcher on the important variables of the study. Though the study was Ltd to biased response from the respondents, it made relevant findings that were used to derive recommendation. From the study findings, It was concluded that I.T positively affect service and performance of the technoserving firms in Paris (Burca, 2008).

## **2.2 THEORETICAL FRAMEWORK**

### **2.2.1 Strategic Choice Theory**

This theory was developed by Dunlop in 1960s when industrial relations in the United States were changing rapidly. The theory encourages the consideration of relevant forces in the exterior environment that affects the occupation of the company hence inducing managers to make modification in their competitive business strategies (Child, 2009). When making these adjustments several options as well as constrained are considered by key decision-makers. The theory advocates for technological reforms and embracement which build up on the strengths of the business activities, operations and strategy. According to Corbijn (2007), adopting I.T plays a major strategic role in business advancements as it helps in assessing changes in the company's business environment.

The I.T improves the processes and outcomes of business by continuously evolving the company in relation to environmental pressures (Ventresca, 2008). I.T assists in the industrial developments through improving the environmental conditions that would guarantee development. This is because technology helps the organization in strategic planning, controlling and implementation process. According to this theory, technology can enable the achievements of both the long-term and short-term goals of the organization through improvised ways and techniques which increases its viability (Bowman, 2008). The profitability and financial performance of the company can be easily improved through effective utilization of I.T in the organizational activities.

This theory relate to the topic of study because I.T can strategically be used to improve systems, policies, structures of the organization and make it more efficient in its operations. As a result, the organization will be able to improve its financial performance in terms of profitability and efficiency. A good example is a strategic information systems. Developed between 1980s to 1990s, their role is to make I.T an integral component of business processes, product and services that help a company gain a competitive advantage in the global market place (Brien, 2005). However this theory also has a limitation. This theory concentrates so much on technology yet there other business environments that affect the organizational success (Anor, 2011).

### **2.2.2 Prospects Theory**

This theory was developed in 1992 by Daniel Kahnemann and it is a interactive economic theory that defines the way people or organizations choose between probabilistic alternatives that involve risk where the likelihoods of outcomes are known (Borjas, 2013). This theory proposes that organizations and people make decisions on the basis of potential value of losses and gains rather than the final outcome of their operations or activities. As per the theory, companies evaluate the losses and gains based on various I.T models as well as the company's strategic plan. The models are used to assist in the decision making process in organizations. Prospects theory also matches the prospective allocation and uses of facilities that more often would ensure profits rather than losses (Anor, 2011).

Prospects theory outlines that organizations include edition and evaluation of processes as two key stages of the decision making (Bowman, 2008). The edition stage involves the analysis of alternatives or methods that would be used by an organization in ensuring that objectives are met. On the other hand, evaluation refers to the analysis of the alternatives on the basis of risks and benefits so that to come up with right selections. The theory states that organizations uses prospects theory in improving its structures, avoid unnecessary risks as well as ascertain gains (Corbijn, 2007).

This theory relates to this research study in that organizations can embrace information system so as to improve its performance in the economic sphere. This is because I.T improves the decision making process of companies through reduction of error in analysis hence fewer mistakes are made during the decision making process. This in-turn improves the future prospects of the company in terms of performance and developments. Due to this, the company is able to ensure improved financial performance in the industry. I.T software's such as decision support systems can be used to improve efficiency of the decision making process (Brien, 2005). The role of this system is to provide managerial and end users with ad hoc and interactive support during their decision making processes (Brien, 2005). The support is tailored to the unique decision making styles of managers as they confront specific types of problems in their business environment. However, this theory has a limitation just like other theories. The theory does not consider other factors such as politics, competition and market volatility that come into play for a business to gain or lose (Seeley, 2007).

### 2.3 Conceptual Framework

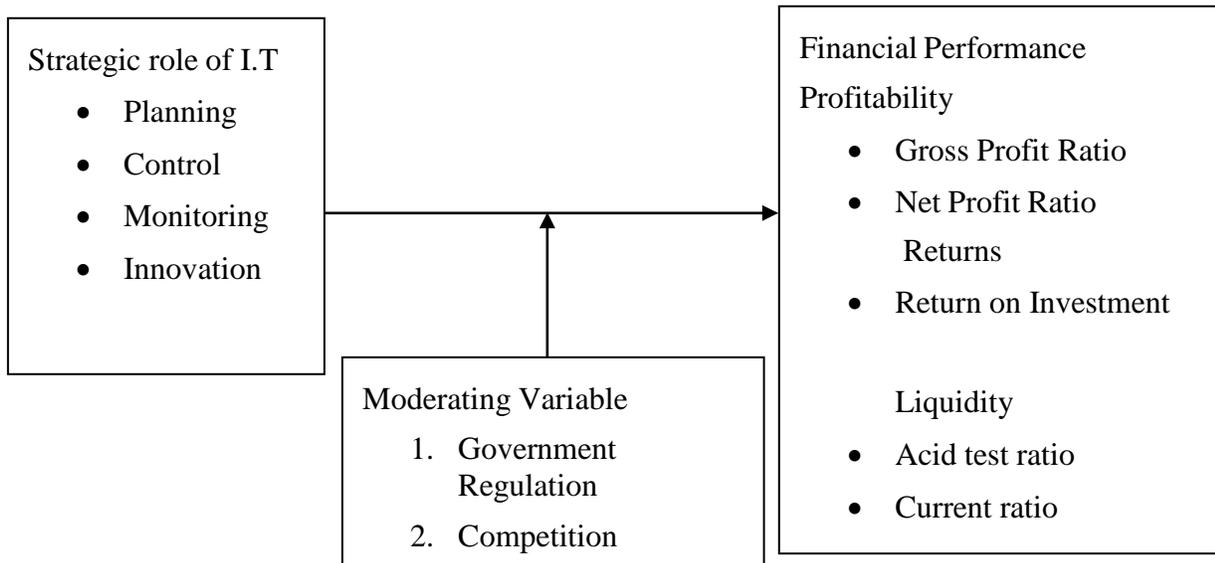


Figure 1: Conceptual framework

### 3.0 RESEARCH METHODOLOGY

This study adopted a descriptive design. The population of this study was all 460 employees of XYZ Paper Industry Limited. The researcher used 30% of the target population so as to total to 62 employees of the XYZ Paper Industry Limited. Stratified random sampling was used to select the sample. The study used both primary and secondary data. Structured questionnaire was used to collect the data. Data analysis for this research study was descriptive statistics.

### 4.0 DATA PRESENTATION, ANALYSIS AND INTERPRETATION

#### 4.1 Response Rate

The sample size of the study was 62 respondents from the XYZ Paper Industry Limited. Table 1 gives detailed information relating to the response rate of the study.

**Table 1: Response Rate**

Response	Frequency	Percentage
Responded	51	82.3
Not responded	11	17.7
Total	62	100.0

From the findings, 62 questionnaires were issued to the respondents from XYZ Paper Industry Limited and only 51 were fully filled. This translated to 82.3% response rate which was greater than Mugenda and Mugenda's (2003) prescribed 50%. Mugenda and Mugenda (2003) considered a response rate of 60% as good while a response rate of 70% and over as excellent (Wambua & Gichuho, 2013). The response from this study can therefore be termed as excellent.

#### 4.2 The effects of IT on Financial Performance of the Company

The study also assessed the Effects that I.T had on the performance of the company. In the study financial performance was measured through Profitability, returns, sales, production and liquidity. The effect of IT on financial performance detailed in Table 2.

**Table 2: Effects of IT on Financial Performance**

	Strongly Disagree		Disagree		Neural		Agree		Strongly Agree	
	F	%	F	%	F	%	F	%	F	%
I.T increases profitability of the company	0	0	0	0	0	0	11	21.6	40	78.4
I.T results to high Gross Profit ratio	0	0	0	0	0	0	11	21.6	40	78.4
I.T increases the net profit ratio of the company	0	0	0	0	0	0	11	21.6	40	78.4
I.T results in high returns in investment	0	0	0	0	0	0	10	19.6	41	80.4
I.T improves customer relations hence increases sales of a company	0	0	0	0	0	0	11	21.6	40	78.4
I.T results in increased production of the company's goods and services	0	0	0	0	10	19.6	26	51	15	29.4
I.T reduces production expenses by making process more efficient	0	0	0	0	5	9.8	20	39.2	26	51
I.T aids in reduction of product price	0	0	0	0	0	0	15	29.4	36	70.6
I.T can aid in improving company's liquidity through planning	0	0	0	0	6	11.8	15	29.4	30	58.8
I.T improves the quick ratio of the company	0	0	0	0	0	0	15	29.4	36	70.6
I.T improves the current ratio of the company	0	0	0	0	0	0	20	39.2	31	60.8

According to the respondents, 11 (21.6%) agreed while 40 (78.4%) strongly agreed that profitability of the company in relation to both gross profit ratio, return of investment as well as net profit ratio was improved by I.T. From the findings, all of the 51 respondents agreed I.T increased profitability of the company.

In regard to increase in sales 40 (78.4%) of the respondents strongly agreed that I.T improved sales of the company through improvement of customer satisfaction, while only 11 (21.6%) of the respondent agreed. None of the respondents disagreed. This indicated that I.T improved the sales of services and goods of the company.

In relation to production, 10 (19.6%) of the participants were neutral, the majority, at 26 (51%) agreed while 15 (29.4) strongly agreed 51 that I.T reduced the production expenses by making the processes more efficient. Due to this the product prices can be reduced to a competitive point due to reduction of product cost. This finding is consistent to Borjas' (2007) which argues that I.T improved the level of production at a lower cost and also ensured that organization performance was improved.

In regard to liquidity, 6 (11.8%) respondents were neutral whereas 15 (29.4%) agreed and 30 (58.8%) strongly agreed. Hence, it was found that 45 (88.2%) of the respondents agreed that I.T improved the liquidity of the company through efficient planning. This shows that I.T improved liquidity of the company.

In relation to IT improving quick ratio and current ratio, 15 (29.4%) agreed and 36 (70.6%) strongly agreed compared to 20 (39.2%) who agreed and 31 (60.8%) who strongly agreed respectively. Therefore it was found that all of the respondents agreed that I.T improved the current ratio as well as the quick ratio of the company. This translated to the improvement of the company's liquidity. This finding is similar to Rolini's (2012) which stated that I.T improved the liquidity of the company based on efficiency of operations as well as increased speed of transactions.

#### **4.3 Challenges Facing I.T**

The study also examined the challenges that hinder effective functioning of I.T in the company. The challenges included in the study were cost, government regulations, attitude of the staff and changes in the I.T. These challenges are discussed, as in Table 3.

From the findings, 20 (39.2%) of the respondents agreed while 31 (60.8%) strongly agreed that I.T faced the challenge of cost. According to all 51 of the respondents I.T was expensive to procure and implement in the company. This shows that cost of procurement and implementation is a hinder to the effective performance of I.T in the company.

In regard to government regulation 15 (29.4%) agreed and 31 (70.6%) strongly agreed, that government regulation hindered the efficiency of IT. All the 51 respondents therefore agreed that government regulations interfered with the efficiency of I.T. This shows that government regulation was a challenge that affected the efficiency of I.T in the company.

**Table 3: Challenges Facing IT**

	Strongly Disagree		Disagree		Neural		Agree		Strongly Agree	
	F	%	F	%	F	%	F	%	F	%
I.T is expensive to procure and implement in the company	0	0	0	0	0	0	20	39.2	31	60.8
The government regulations negatively affects the efficiency of IT	0	0	0	0	0	0	15	29.4	31	70.6
Attitude of the staff can greatly hinder the implementation of IT.	0	0	0	0	0	0	10	19.6	41	80.4
Changes in IT platforms can render certain process and/or jobs obsolete	0	0	0	0	0	0	15	29.4	36	70.6

In relation to attitude of the staff as a challenge to IT, 10 (19.6%) agreed whereas 40 (80.4%) strongly agreed. This indicated that attitude was a major challenge to the effective performance of I.T in the company. From the findings, 15 (29.4%) agreed while 36 (70.6%) strongly agreed that change in IT platforms could indeed render certain jobs and/or jobs obsolete. This shows that constant change in I.T was a challenge that affected efficient performance of I.T in the company. This was in line with Rolini's (2012) discussion of the various challenges that affect I.T such as Budget of the company, government regulations, attitude of the staff, changes of IT platform (obsolescence) as well as competition are among others

From the findings, 100% (51) of the respondents agreed that I.T improved planning, better control of resources, improved monitoring and responsibility as well as enhancement of innovation. This implies that I.T played a crucial strategic role in the growth and development of the company. This finding was in contrast with Ventresca's (2008) who argues that the strategic role that I.T played in planning, monitoring, control and innovation has resulted in improved organization performance.

The advancement I.T elevates the monetary and non-monetary performance of the a firm (Corbijn, 2007). From the findings of the study it was found out that I.T improved the company's financial performance via the improvement of profitability( Gross Profit and Net Profit) and liquidity (Quick ratio and Current ratio). This implies that I.T ensures the proper functioning of the finance functions of the company hence improving its returns. This finding is consistent to Burca's (2008) which stated that I.T enhanced the operations and monetary performances of

companies by coming up with systems and platforms that gave the company competitive edge in the financial market.

There are various challenges that affected the efficient performance of I.T at the XYZ Paper Industry Limited. From the findings, it was found that cost of procurement and implementation, government regulations, attitude of staff and changes in technology are the challenges that affected the effective performance of I.T in the company. This implied that such challenges hinder effective growth and development of the company hence the difficulty in meeting its objectives. This finding is consistent to Rolini's (2008) which stated that budget of the company, government regulations, attitude of the staff, changes of IT platform (obsolescence) as well as competition are among the challenges that affect I.T in organization.

It was also found that government strategies and competition create an environment that facilitate the effective operation of I.T in the company.

## **5.0 CONCLUSION**

The study concluded that I.T improved the financial performance of the company. This is because 100% (51) of the respondents agreed to this. The financial performance is improved via the improvement of profitability and liquidity as a result of usage of I.T. This shows how important I.T was to the company. I.T improved systems and efficiency of structure of the organization that in return lead to increased profitability and returns (Borjas, 2013).

Budget of the company, government regulations, attitude of the staff, changes of IT platform (obsolescence) as well as competition are among the challenges that affect I.T in organization (Rolini, 2012).

In regard to challenges that affected the I.T in the company, it was concluded that cost of procurement and implementation, government regulation, attitude of the staff and changes of I.T were challenges that affected the effective performance of I.T. Over 90% (47) of the respondents agreed to this.

The study also concluded that government strategies and rules plus the competition in the industry provide a better platform for I.T to affect the financial performance of the company. This was backed by 100% (51) of the respondents.

## **6.0 RECOMMENDATIONS**

The company should use the right systems and structures that enhance the effective performance of I.T. This will help different organizations around the globe to work effectively as a result of proper working of I.T via the use of right systems and structures in the organization.

The company should outsource different services and goods that are cost friendly. This will ensure that the company cut down on some cost. This will eventually improve the financial performance of the company. This will be beneficial to finance managers to plan on how to cut down on cost.

The company should institutionalize a strong culture that embraces the use of I.T in various operations. This will improve the overall performance of the company despite the competition in

the industry. This will help organizations to improve their financial performance and simplify the operations within such organizations.

The company should enhance its management. This will ensure that company's operations and transactions are done efficiently and effectively. This will help finance manager in planning and executing operations that enhance the financial performance of the company.

## 7.0 REFERENCES

- Anor, R. (2011). Apex Creativity Ltd verse Karatasi Industry Ltd. *Research Journal*, 3(2), 2-9.
- Borjas, G. J. (2013). *Labor economics*. New York: McGraw-Hill Publishers.
- Bowman, W. H. (2008). Importance of patents and information services to research workers. *Journal of Research*, 18(2), 81-91.
- Brien., J. O. (2005). *Introduction to I.T systems*,(11th ed.). New Jersey: Prentice Hall: Upper Saddle River.
- Burca, S. D. (2008). Effects of I.T on service practice and performance. *Journal of I.T*, 12(9), 111-124.
- Child, j. (2009). Strategic choice theory. *Journal of Management*, 3(1), 11-23.
- Corbijn, A. (2007). Business control management. *Journal of Management*, 10(7), 21-35.
- Farhanghi, A. A., & Abbaspour, A. (2010). Effects of I.T on organizational structures and firm performance. *Journal of I.T*, 14(11), 422-437.
- Francalanci, C., & Morabito, V. (2008). I.T and business performance: the mediation effect on organization absorptive capacity. *Journal of Management*, 18(10), 297-312.
- Grossman, R. (2008). Impact of technology change on firm's performance. *Journal of Business*, 8(1), 3-13.
- Johnson, D. K. (2012). 4 key elements: Strategic I.T plans. *Journal of Management*, 3(2), 1-10.

- Morikawa, M. (2004). I.T and the performance of Japanese SMEs. *Journal of Business*, 13(9), 54-65.
- Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods; Quantitative and qualitative approaches*. Nairobi, Kenya: Acts Press.
- Oliveira, T., & Fraga, M. (2013). Literature review of information technolgy models at firm level. *Journal of Research*, 10(8), 513-525.
- Omwono, W. (2009). Sales and produts of Karatasi industry ltd. *Business Journal*, 3(2), 41-50.
- Patterson, R. A., & Rollan, E. (2012). I.T and management. *Business Journal*, 14(4), 3-10.
- Rolini, B. (2012). Challenges facing today's IT professionals. *Journal of I.T*, 3(4), 13-23.
- Roman, R. M., & Hayibor, S. (204). The relationship between social and financial performance. *Journal of Management*, 16(13), 7375-7382.
- Rose, J. (2010). Structuration theory and information system development-frameworks for practice. *Research Journal*, 11(9), 161-175.
- Seeley, J. R. (2007). Planning definition and strategy. *Journal of Research*, 3(4), 1-11.
- Smith, H. A., & Mckeen, J. D. (2007). Developing I.T for business value. *Journal of Management*, 13(4), 1-13.
- Ventresca, P. (2008). The strategic role of business analyst. *Business Journal*, 8(3), 31-46.
- Wambua, K. M., & Gichuho, C. M. (2013). Determining influence of management, commitment on development of emotional intelligence in public service: A survey of ministries in Kenya. *Business Journal*, 2(5), 65-77.
- Wang, Q. (2008). The impact of I.T on financial performance of the third party logistics firms in China. *Journal of I.T*, 3(2), 12-23.