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Effect of Cost Management Strategies on Operational Efficiency of Bank of Kigali, Rwanda

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Abstract

High operational cost is a perennial problem in banking sector in Rwanda. The purpose of this study was to examine the effect of cost management strategies on operational efficiency of commercial banks in Rwanda with special reference to Bank of Kigali. The cost management strategies that formed the specific objectives included recruitment and training, technology and business process re-engineering. The target population was 140 managers of Bank of Kigali. A sample size of 103 calculated from Yamane's formula was utilized. The study adopted descriptive research design. The study data constituted both primary and secondary data. Primary data was collected using questionnaires which were distributed to the managers. Secondary data was collected from published financial reports of BK. The study adopted purposive, stratified and random sampling techniques. The data was cleaned and entered into SPSS version 22 for processing. Presentation of data was aided by tables and graphics Descriptive analysis involved computing frequencies and percentages. Inferential analysis involved computing Pearson correlation coefficient and regression coefficients. Descriptive findings indicated that majority of respondents were in agreement that recruitment and training, technology and business process re-engineering indeed affect operational efficiency. Correlation analysis findings indicated that Pearson's correlation coefficient for recruitment and training, technology and business process re-engineering were 0.69, 0.75 and 0.56 which are all positive and significant an indication of a positive association between cost management strategies and operational efficiency. Regression analysis also reported R Squared value of 0.692 an indication that cost management strategies account for 69.2% of operational efficiency variations. Moreover, beta coefficients for recruitment and training, technology and business process re-engineering were found to be positive and significant indicating that there is a positive significant effect of cost management strategies on operational efficiency. This study is of importance to the commercial banks' management team, BNR and academicians or rather future researchers who wish to explore more in the financial sector.

Introduction

Globally, the business world is increasingly becoming competitive and firms are increasingly devising new efficient and better ways of business management in order to ensure that costs of running enterprises are minimal so that they are able to increase their profits hence performance. Anderson (2007) perceives cost management as all attempted efforts by the firm towards cost reduction. This is usually invoked by the stable and consistent decrease in companies' profits. Managers therefore resort to inventing new methods of doing business in order to reverse the decreasing profits trend hence able to make firms successful. Cost management strategies forms one of the basic and crucial tools in management of any firm, (Zengin and Ada, 2010). As Kumar *et al* (2011) puts it, firms need to adopt better and efficient cost management strategies if they are to increase their profits. This is from the theoretical perspective that profits results from the difference between costs and revenue. Therefore, by managing costs, the firm incurs less cost of operation which is the main objective of cost management and hence profits increase.

Raymond (2015) outlines a number of reasons why cost management is very important for a firm. First, cost management is very crucial in decision making process and also in enabling the firm to earn a competitive edge. Through cost management, the firm is able to identify the key areas that attract many expenses and contributes less return. This information is very important for firm managers since they are able to make and implement sound decisions that aims to reduce costs in such areas hence efficiency. The firm is able to earn

competitive advantage through cost management in the sense that it experiences less costs compared to competitors while offering quality products and services hence widening the firms market power. Moreover, cost management ensures strategic resource allocation which ultimately improves customer satisfaction hence market power expansion (Ellram and Stanley, 2010). Additionally, efficient cost management helps in cost forecasting thereby improving overall management of business. Before the start of business or expansion of business, there is need to carry out cost forecasting so that future costs can be determined and compared with expected revenues so that the firm is able to make a decision on whether to start the business or implement the expansion plan. Cost management knowledge is therefore important at this point of cost forecasting. Moreover, through cost forecasting, the firm is able to spend less resources, incur less working capital, cost per unit reduces and high quality product provision which cumulatively amounts to increased firm valuation.
There are a number of reasons why the need for cost management has become more profound in the global business arena (Mc Graw Hill, 2013). First, cost management has pronounced due to increased global competition. Firms need to access cost management information in to enable them compete favorably in the business sector. The world is now operating like a village and therefore customers are able to access services everywhere. The increased entry of new firms in the banking sector creates stiff competition and firms are pushed to the corner to device more efficient operational ways in order to maintain their customers at the same time make efforts to win new ones. As they do this they need to take cost management into consideration otherwise they will end up making loses. Secondly the increased need for cost management information has been brought about by changes in the manufacturing sector.
Companies are nowadays adopting lean manufacturing as a cost reduction strategy. This is a method of manufacturing which targets cost reduction by using flexible methods of manufacturing, and putting quality control techniques in place. Lean manufacturers often use lean accounting techniques for measurement and sustainability of lean manufacturing method. Thirdly, the need for cost management information has also arose due to adoption of information technology in business undertakings (Guyo and Aduda, 2014). With the use of internet and enterprise resource management, cost management information is needed in the adoption of new product manufacturing technologies to assess whether such technologies indeed lead to cost reduction for the firm hence increase profitability of the firm which is the ultimate goal of any business organization. Information technology is also used in managing customer and supplier relationships which is key to business performance. cost management information is essential in this scenario to ensure that the technology adopted in management of supplier and customer relationship is cost effective to the firm. Moreover, the need for cist management information has increased due to increased customer focus by business organizations.
Customers are nowadays treated like a king and therefore business need to ensure that customer satisfaction is its optimal. The reports on cost management need to include changes in customer tastes and preferences and how to improve customer satisfaction. This calls for additional costs and therefore prudent cost management techniques is necessary. Lastly the need for cost management information has arisen from changes in management styles within organizations and changes in social, political and cultural environment. Cost management reports has expanded to include the players from the external environment of the firm such as the local community, government officials and employee welfare. Reporting of cost management also focus on cross functional teams whereby employees from all the departments of the firms need to work together to ensure that the firm achieves its objectives. This expanded role of cost management reporting necessitates proper cost management techniques in place to reduce the cost of such additional roles.
Operational efficiency can be defined as firm's ability to produce products and services at lowest cost possible without compromising quality, (Allen & Rai, 1996). According to Odunga (2014), operational efficiency can also involve the outcome of combining human and capital infrastructure, processes and technology to improve productivity and value of firm while maintaining low cost of operations. Firms that are able to achieve operational efficiency stands a better position to be ahead of their competitors hence dominate the market. They are able to produce quality products and offer better services at relatively low costs. This attracts more customers to the firm which ultimately improves firm's profitability.
The banking sector in Rwanda is increasingly becoming competitive day by day due to more players in the sector right from commercial banks, savings and credit cooperatives, microfinance institutions and non-bank financial institutions with the main regulatory body being National bank of Rwanda (Gakwandi, 2018). The faster growth of players in the sector is as a result of the liberalization of the banking sector by the Rwandan government through its regulatory body BNR. Efficiency in banking operations is therefore paramount in the sector for long term growth and sustainability in profits. Among the determinants of operational efficiency,

cost management is key. Commercial banks need to adopt various cost management strategies in order to achieve efficiency in their operations which guarantees them long term survival in the sector. In a bid to reduce cost of operation, Banks in Rwanda have increasingly adopted a number of cost management strategies like efficient recruitment and training policies, technological improvement, business process reengineering, continuous risk assessment among others. All these are aimed at ensuring that the cost of operations is minimized hence able to achieve operational efficiency.

The banking sector in Rwanda has become very competitive in the recent past with the players in the industry taking keen interest on the financial performance as it is the prerequisite for the banks survival both in the short term and long term. With the expansion of the financial system in Rwanda several firms have joined the banking industry in the recent past (Immaculee, 2018). However, Rwanda's banking industry has faced a myriad of challenges more so issue of non-performing loans, inadequate infrastructure growth leading to low financial inclusion and high operational costs (BNR 2018 Report). With the stiff competition in the banking industry and need to curb these operational challenges more so operational cost, there is need for the banks to come up with prudent cost management strategies and even improve the existing strategies in order to increase their survival chances in the competitive market. This will go a long way in continuous risk mitigation and improved operational efficiency which is a measure of bank performance. Despite this challenge of high operational costs in the banking industry leading to operational inefficiency little research has been done on cost management strategies and operational efficiency in Rwanda.

The general objective of this study was to examine the effect of cost management strategies on operational efficiency of commercial banks in Rwanda taking a case of Bank of Kigali. The study was guided by the following specific objectives:

1) To assess the effect of recruitment and training on operational efficiency of Commercial Banks in Rwanda
2) To examine the effect of technology on operational efficiency of commercial banks in Rwanda.
3) To establish the effect of business process re-engineering on operational efficiency of commercial banks in Rwanda.

Literature

This section focuses on discussing the main concepts underlying this study. These include operational efficiency and cost management strategies.

Operational efficiency

Operational efficiency is part of the efficiency concept which measures deviation from the cost efficient frontier that represents the maximum attainable output for the given level of inputs. According to Odunga (2014), operational efficiency involves the outcome of combining human and capital infrastructure, processes and technology to improve productivity and value of firm while maintaining low cost of operations. With reference to various definitions, efficiency is a multifaceted concept with several meanings depending on the perspective of the user. The expansion in the firms output results into achievement of scale and scope of production. The banking sector is competitive sector hence the need to scale efficiency in their operations to ensure customers get the best services as they are the key drivers of banks performance. Efficiency in bank operations will result into risk reduction in their processes and this will ultimately improve their performance.

Cost management strategies

Traditionally, cost systems were in place to control costs temporarily and were much focused on internal efficiency. Cost management involves quality planning and cost decreasing process that aims to manage costs prior to occurrence. The existence of effective cost management system in the firm results into improvement in quality, cost/price and functionality of a product (Wanjiku and Aduda, 2014). The banking sector has aggressively improved their cost management strategies and modern methods are widely used in the banking sector to manage cost in a bid to improve their efficiency in operations and achieve customer satisfaction. There are a number of cost management strategies that modern banks use in a bid to reduce their operational costs and achieve efficiency in their operations. Among these strategies include recruitment and training, technology and business process re-engineering.

Recruitment and Training

Recruitment is a process that involves bringing in the company new employees. This process needs to be transparent and rigorous in order to ensure that the best employees are brought in the company who has the right skills and competence to add value to the company. In addition continuous training of staff is paramount for achievement of efficiency since it will enable them to acquire the right skills and competencies required for better service delivery particularly in the banking sector.

Information Technology (IT) is a man-made resource, embracing principally the electronic technologies of computers and telecommunications (voice, data, and video), and comprising of both electronic hardware and computer software. Banks are using information technology more and more in delivering transactions. As elsewhere in the world, Rwanda banking systems have seen many technological changes. Most of them for example, computerization of bank processes and using Automated Teller Machines (ATMs) were introduced by foreign banks, who imported them from their headquarters. The use of ATMs for example has gained momentum in several countries global over time more so in English speaking countries. Mobile banking in addition has enhanced financial inclusion and improved access to financial services in several countries.

Business Process Re-engineering (BPR) is a Radical redesign of core business processes to achieve dramatic improvements in cost, quality, service, speed, cycle time and overall productivity. It is a process that cuts across an organization’s various levels with the main focus on satisfying customer requirements and expectations. It calls for an organization to completely abandon its old ways of operations and adapt to new ways of thinking for improved organizational performance (Ogada and Magutu, 2017).

Efficiency Structure Theory

This theory was put forward by Harvey Leibenstain in 1966.The efficiency structure theory postulates that efficiency is the central determinant of profits and therefore it determines the differences in profitability among firms. According to this theory a more efficient firm is in a better position to gain more profits than a less efficient firm. This theory approaches efficiency from two sides. These are X- efficiency and scale efficiency. The X-efficiency focus on technology as greater contributor to cost reduction. It stresses that more efficient firms are characterized by use of advanced technology and a competent management staff which when summed up amounts to greater cost reduction and hence greater profitability. Therefore, more efficient firms are more profitable due to the low cost they incur, (Athanasoglou *et al*., 2006). On the other hand, the scale efficiency focuses on scale of production for the firm. This approach emphasize that large firms are able to face low per unit cost of production and higher profitability due to their economies of scale. Large firms are also able to command large section of the market resulting to high market power and concentration and ultimately high profits. This theory is relevant to this study since it stresses on efficiency of firms which forms the dependent variable in this study. For firms to realize greater profitability and hence performance, efficiency in their operations is paramount. Efficiency in operations can only be achieved by a firm if it’s able to incur less operational costs and therefore there is need for firms to come up with strategies which aim at reducing their operational costs in order to achieve operational efficiency. Some of these ways includes BPR which involves continuous improvement in business operations and technological advancement which also tends to reduce cost not forgetting recruitment policies and trainings. Through training, employees are able to get more skills which increases their productivity and innovativeness hence able to achieve efficiency and in business operations.

Cost Management and Efficiency Theory

This theory posits that managers’ plan and control expenditures by updating themselves with information on when and where costs occur and what costs add to the value of a product. In the “traditional model of cost behavior”, costs are classified as either fixed or variable and variable costs change proportionately with changes in the output level (Steliaros, 2008). In the second model, managers deliberately adjust resources in response to changes in volume. While efficient production specifies the optimal combination of inputs for a given level of output, several factors may intervene to preclude or limit resource adjustments. These factors are hypothesized to lead to “sticky” cost behavior in which costs adjust asymmetrically; more quickly for upward than for downward demand changes. A key factor in determining whether adjustment occurs is the cost of adjustment itself. For example, increasing labor inputs may require search, recruitment, and training

costs while decreasing these same inputs might require severance payments. When adjustment costs are present, managers weigh the costs of releasing (adding) resources when activity decreases (increases) against the alternative of not adjusting. Adjustment costs may be a property of the production function, as in the example of labor adjustments, or they may arise if managerial incentives diverge from those of the firm. In cases in which manager's compensation, job satisfaction or other rewards are linked to span of resource control, agency theory predicts that private adjustment costs motivate managers to grow faster than they shrink. Thus, a theory (or theories) about individual adjustment costs could be used to motivate tests of asymmetric cost behavior. In that case, one basis for the null hypothesis would be that adequate management controls and appropriate competition within the firm for scarce resources prevent this influence of individual managers from being manifest in sticky (asymmetric) cost behavior for the firm (Moel & Tufano, 2002). Aside from the costs of adjustment, uncertainty about future events creates another impediment to adjustment. With certainty about the future level of demand, managers can easily calculate a payback period for recouping adjustment costs associated with reestablishing the optimal resource level for future output. Adjustment occurs when the new level of demand is expected to be sustained and/or adjustment costs are modest. With uncertainty about future demand this calculation becomes more difficult. In particular, while adjustment costs may be certain, the period in which they will be recovered is uncertain (Steliaros, 2008). Indeed, part of the uncertainty is that in the future, the need for new and different adjustments may be indicated. In many circumstances significant uncertainty favors the "do nothing" alternative; however, it is important to note that this choice is itself cost management. Moreover, like firm-level adjustment costs, theory does not support the thesis that uncertainty is associated with asymmetric adjustment that favors upward versus downward activity changes. Finally, no consideration of the effect of adjustment costs on efficiency decisions is complete without considering how managers evaluate losses incurred from producing with a suboptimal mix of resources. In a perfectly competitive market, failure to adjust would cause the firm to face higher costs than competitors who adjusted (or who entered the market with new, optimized production technology and capacity) while receiving identical (market) prices (Anderson, 2007).
This theory is relevant in this study since banks are keen on minimizing operating costs and maximizing on operating incomes which ultimately adds to the profitability of the bank. Therefore, operating efficiency is achieved when the bank is able to minimize its expenses and maximize income. This can be achieved by among other factors making sound decisions regarding asset liability management.

Resource-Based Theory

According to Pearce 11 and Robinson (2011), resource based theory perceives firms competitive advantage as determined by its package of assets, skills and other intangibles. Resource based theory perceives firm's performance as a function of its resources. According to Grant (1991), A firm is a package of resources which coordinate together to boost firm's capability to be more profitable. Resources of the firm are the aids or requirements of production and distribution process of the firm. The basic resources of the firm include labour, capital and technology. Then success of the firm and its competitiveness is dependent on how these resources are managed and coordinated. Success of the firms differs from one firm to another depending on how a firm is able to effectively utilize its resources. Firms that make good use of the resources are in a greater position to be ahead of those that are not using their resources optimally. Therefore, for a firm to gain competitive advantage in terms of profitability or financial stability there is need for effective utilization of the available resources.

The resources of the firm enables firm's operations to be conducted efficiently and effectively. The greater the utilization of the firms resources the greater the firm's operational efficiency and financial performance. there has been controversy on understanding the relationship between firm's characteristics and operational efficiency among researchers (Wanjiku, 2014). One group supports industry structural characteristics as determinants of firm's operational efficiency and performance while another group is for the specific factors of the firm as key determinants of operational efficiency and performance. this study will focus on both structural factors of industry and firm's specific factors as components of cost management strategies. Industry characteristics will include BPR and Technology whereas specific factors will include training and recruitment. This theory is relevant to this study due to the fact that the study is focused on company's resources as constitute technology, BPR strategies and recruitment and training. These are company's skills and capabilities that may give a company a competitive edge in the industry which the theory is based on.

Particularly, for commercial banks to gain a competitive edge they must utilize their resources effectively. Training of staff enhances their skills and this impact positively on firm's performance. Technology makes work easier and saves on time and costs and therefore there is need for continuous improvement in technology by firms to increase their competitiveness. Lastly BPR ensures that the firm is not outdated in the industry and is always changing the functioning of business operations aiming at improving service delivery and efficiency of operations which ultimately leads to financial success.

Empirical Review

Mishra and Himanshu (2010) in India carried a study on employee cost and productivity and profitability in public and private sectors. The study involved trend comparison in private and sector of employee cost and productivity. The results revealed that private sector employees are more productive and overall less costly to the firm compared to public sector employees. The study revealed further that employee productivity and cost can be reduced through training which ultimately improves firms output and reduced cost pf production and therefore profitability increases.

According to Orishede (2011) in Nigeria training is very important for banks to perform well. He analyzed the impact of training on organizational growth, and self-confidence of employee. The study revealed that training though does not impact on employee self-confidence it contributes greatly to productivity of employee and this ultimately leads to greater output and organizational expansion through improved sales and profitability. These findings were however contrary to those of Alex *et al* (2015) in Ghana who found that training has a negative impact on organizational performance and that recruitment process in organization also does not have any significant effect on organizational performance meaning that no relationship exists between the conduct of recruitment exercise and performance of organizations.

Joseph and Joyce (2018) conducted a study in Kenya concerning cost management strategies and organization performance. The study adopted descriptive design and data was collected using open and closed ended questionnaires. The results indicated that recruitment and training was influential in reducing company costs since it boosts skills of employees and creates cooperation among members hence they are able to work together towards achievement of company goals. The study further found that training improves productivity among employees and minimizes errors in conducting operations hence reducing operational costs.

Rwagasana (2018) carried a study in Rwanda on the relationship between human resource development and financial performance of financial institutions in Rwanda a case of BK. The findings revealed that training is one of the human resource development strategies that banks need to take seriously since it significantly affects banks financial performance. according to the study, training enhances productivity of employees and this leads to speedy service delivery which saves the firms cost of labour and hence financial stability improvement. Further, training also leads to more innovations by employees which further adds to work efficiency and hence cost saving and improved profitability. The findings were supported by Andine and Julius (2016) in Rwanda who also found that training and development of employees impacts positively on firm's financial performance.

Technological advancement is another strategy that firms in all the sectors across the globe have employed in a bid to reduce the cost of operation. Hassan *et al* (2010) study in Italy on bank performance and internet adoption compared the modern multichannel banks which are characterized by higher technology and traditional ones which employ relatively lower technology. The findings indicated that the profitability of the multichannel banks seems to be higher than that of the traditional banks. This is an indication that embracing ICT in business operations improves the profitability which was measured in terms of Return on Assets and Return on equity. These results were also echoed by Fatma and Aysel (2017) in Turkey. Pooja and Singh (2009) in India asserted that banks which are more inclined to innovation increases in size overtime, are on better position in terms of profits and possesses a competitive edge, incur less expenses and their operational efficiency is relatively higher as compared to non- innovative ones.

Juma (2010) conducted a study in Kenya on ICT adoption and financial performance of commercial banks. The study focused on electronic money transfers, electronic data interchange and mobile money transactions. The findings indicated that ICT adoption through its major variables highlighted earlier greatly improves the profitability of commercial banks. These findings were also similar to those of Judith and Kibati (2016) in Kenya, Ikechuwuku (2019) in Nigeria who found that financial innovations greatly contribute positively to bank performance in Nigeria.

Wanjiku (2014) assessed the effect of cost management strategies on financial performance of commercial banks in Kenya focusing on technological application on supply chain management, labour management and stock management. The results indicated that cost management strategies considered are very significant in achieving financial performance. These results were supported by the findings of Nkiru and Okoye (2015) who carried a study in Nigeria on cost management and performance of corporate firms.

Ngango (2013) analyzed the effect of electronic banking on performance of commercial banks in Rwanda a case of BK. The study found that electronic banking is significant in the success of commercial banks in terms greater contribution to the financial performance. These results are similar to those of Munyaneza (2017) who conducted a study on bank Innovation and performance. He found that bank innovation has improved the customer base overtime at the BK leading to increased bank profits.

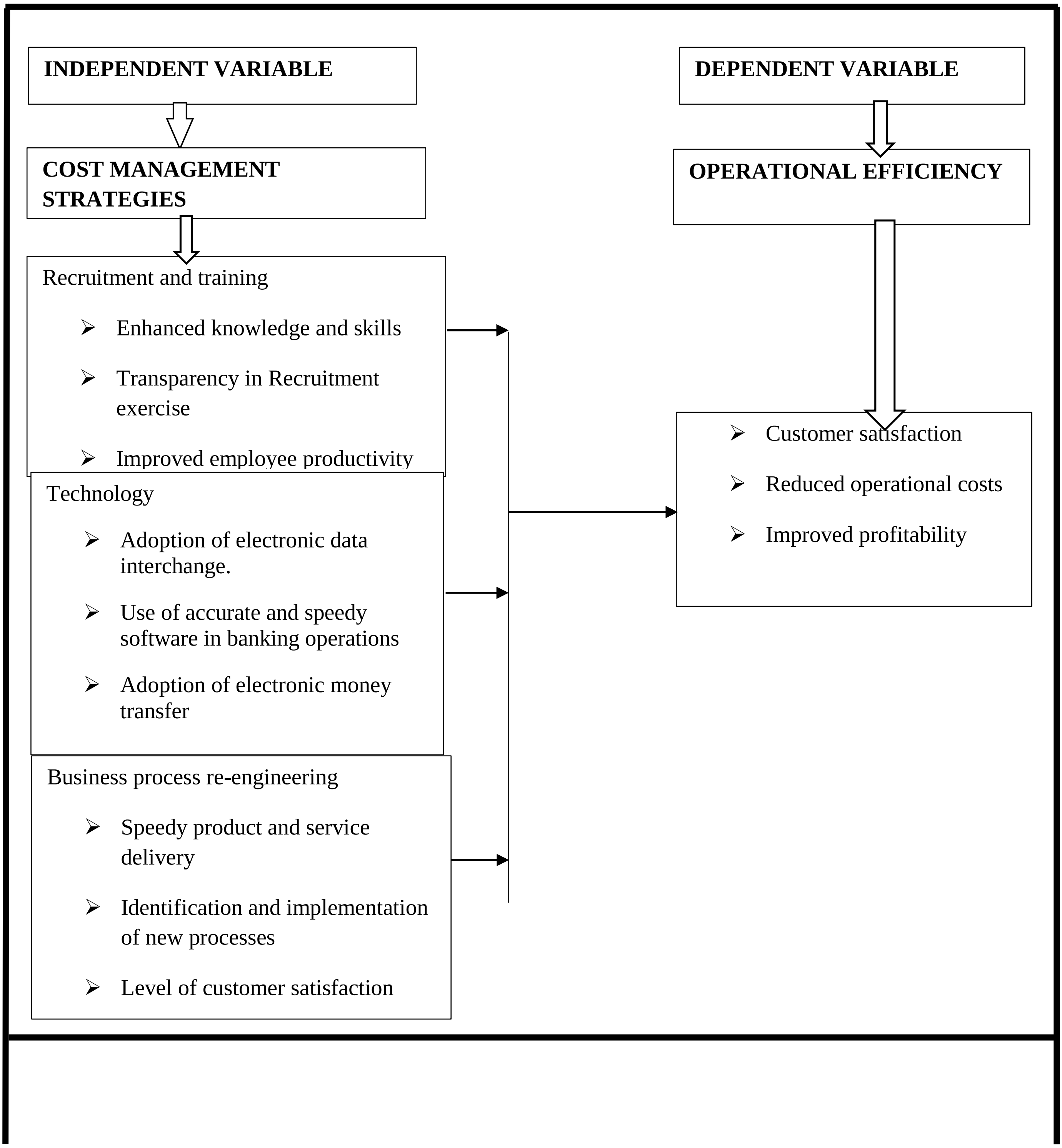
Kumar & Mishra (2014) conducted an empirical study in India to determine how Business process reengineering has improved the performance of state bank of India. From their findings, business process reengineering has led to increased number of customers and hence market share and industry growth has grown tremendously due to adoption of business process reengineering.

Nadeem M (2014) conducted a study in Pakistan to determine the extent of usage of BPR in Pakistan banks and how it affected the performance of banks. A pilot study was done across all commercial banks in Pakistan. The findings indicated that BPR is widely practiced in Pakistan banks and that its use is valid and have led to improved performance of commercial banks in Pakistan.

In Nigeria, Moruff & Richard (2017) conducted study on bank performance by focusing on Business process re-engineering contribution. The study utilized secondary data and bank performance was measured in terms of Return on Assets. The findings indicated that bank performance improved after adoption of BPR in terms of profitability. In other words, post BPR bank profits were higher than pre BPR bank profits. These results were supported by Nora Deborah (2014) and Ogada and Magutu (2017) in Kenya who opined that Business process reengineering is very vital in improving firm’s productivity and efficiency and hence profitability and better performance of the company. Deborah’s findings indicated a strong association between business process reengineering and commercial banks performance.

A study was conducted in Ethiopia by Abdurezak M (2014) on business process reengineering and the performance of public commercial banks. A number of performance measures were considered including speed of service delivery, quality of service, innovation and customers’ satisfaction. According to the results, the study reported that BPR greatly contributed to the achievement of several performance indicators considered across commercial banks. BPR led to improved service quality, the speed of service delivery increased, more innovation and enhanced customer satisfaction.

Conceptual Framework



Methodology

Kothari (2008) describes a research design as a conceptual structure which act as a guide of conducting research. It constitutes data collection and analysis with an aim of achieving the research objectives. This study adopted descriptive research design. A descriptive research design aims to observe and describe the behavior of phenomena or variables within a given period so as to get concrete results regarding their relationship between the variables of interest in a research. Since this study concerned investigation of relationship between cost management strategies and operational efficiency, descriptive research design was justified. A quantitative research involves use of numbers in data collection and analysis (Kothari, 2010). The

research was quantitative since the researcher collected data on the variables of interest which were coded and analyzed quantitatively.
According to Immaculee (2018) research population comprises of individuals or objects that exhibits characteristics of interest to the researcher. This research targeted managers both top and middle level managers of Bank of Kigali. The population size was 140 managers.

Population frame

Managers	**number**
Top level managers	20
Middle level managers	120
Total	**140**

Source: Bank of Kigali

According to Kothari (2010) a sample is a subset of a population and to a wider percentage reflects the features of a population. Owoolabi (2003) opines that using the whole population is better for achieving better results though different circumstances may force a researcher to use a sample. Using a whole population as the sample is always desirable as it increases the chances of accuracy of the findings. However, in case of financial and time constraints involved in research process the researcher may decide to take a representative sample of the population. The sample size was calculated using Yamane's formula

$$n = \frac{N}{1 + N*(e)2}$$

where n is the sample size, N is the total population and e is the sampling error. By using the formula above when e= 0.05, N= 140 then sample size n is approximately 103 managers of Bank of Kigali

Where; n= is the required sample size

Managers	**number**	**Sampling technique**
Top level managers	15	Random sampling
Middle level managers	88	Random sampling
Total	**103**	

Source: Bank of Kigali

Sampling techniques are methods applied by a researcher in selecting the respondents to form the sample size. This research adopted purposive, stratified and random sampling techniques. Purposive sampling technique is a non-probability sampling technique where the researcher only focuses on a specific group of population that best suits the study. Purposive sampling involves deliberately choosing a specific informant due to the fact that he or she possesses qualities that are relevant to the researcher. (Dolores, 2007). This study involved cost management and operational efficiency in the banking sector. The researcher considered top and middle managers as the most appropriate group since they are knowledgeable about the various bank operations and are tasked to ensure that bank operations run smoothly thus ensure efficiency in the banking system. Stratified sampling is where the population is divided into various strata depending on shared characteristics among the population units. The managers were grouped into two categories these are top level and middle level managers hence we had 2 strata. Simple random sampling was then applied when choosing the managers within each stratum.

Primary data is data collected for the first time from the population or sample. Primary data is always reliable and accurate since its collected from the original source and therefore free from distortion by other users. Primary data is also comprehensive since the respondent has the room to give his or her views. The main instruments that are commonly used in primary data collection include questionnaires, interview guides, focused group discussions, observations among others. In this research, Primary data was collected from the managers of BK using structured or closed ended questionnaires.
Secondary data is data collected by someone else other than the user. Secondary data is always contained in various documentaries such as magazines, journals, newspapers, quarterly government reports, company

financial reports among others. In this study the main document that the researcher focused on were the financial reports both income statement and financial position reports of Bank of Kigali.
The researcher used mainly questionnaires to collect primary data for this research. Questionnaire is a data collection instrument where the researcher presents a series of written questions to the respondents to answer for the purpose of gathering information. Questionnaires can either be closed or open ended. Open ended questionnaires offer the respondent more room for discussion since the questions are presented in an open format where the respondent is able to give his opinion in a discursive form. On the other hand, closed ended questionnaires are stricter and limit the respondent in terms of answering the questions. The questions are presented in a 5 point Likert scale. Questionnaires are always preferred as data collection instrument since they permit the researcher to collect a large volume of data within a very short time and at fairly less cost more so when emails are used. Moreover, questionnaires are preferred since they are easy to administer and lastly they offer room for the respondent to express his opinion in case of open ended questions. The questionnaire that was used in this research was closed ended questionnaire in order to save time and cost.

Data Analysis, Interpretation And Discussion

The first objective was to assess the effects of recruitment and training on operational efficiency. For descriptive analysis the researcher, the researcher asked some questions pertaining to various indicators of recruitment and training and their effects on operational efficiency. The findings indicated that a vast majority of managers agree that indeed recruitment and training is very important determinant of operational efficiency with more than 90% of respondents being in agreement with all the indicators of recruitment and training. There was none who disagreed that recruitment and training affects operational efficiency of commercial banks while an insignificant number of respondents remained neutral on the statements. The mean for all the statement was nearly 4 with a very small standard deviation an indication of a strong agreement that recruitment and training exercise is highly practiced at Bank of Kigali. The findings are summarized in the following table 4.6.

Recruitment and Training and Operational Efficiency

Statement	SA	A	N	D	SD	Mean	Std Dev.
Transparent recruitment exercise	70%	20%	10%	0%	0%	4.85	0.04
Competent recruitment team	65%	30%	5%	0%	0%	4.71	0.03
Continuous staff training	72%	24%	4%	0%	0%	4.80	0.06
Knowledgeable and enough trainers	60%	35%	5%	0%	0%	4.78	0.05
Skilled and experienced trainers	90%	10%	0%	0%	0%	4.89	0.02

SA-Strongly agree, A-agree, N-Neutral, D-Disagree, SD-Strongly disagree

Source: Field data, 2022

The second objective of this study was to examine the effects of technology on operational efficiency of commercial banks. Theory posits that technology is a key tool in management as it performs the key function of making work simpler and efficient thus reducing cost and improving efficiency in operations. Descriptive statistical analysis involved getting respondents views on whether various technological indicators affect operational efficiency. The findings indicated that over 75% of respondents strongly agreed that technological aspects indeed exist at Bank of Kigali while the remaining percentage agreed (table 4.7). The mean value for all the statements averaged nearly 4 with a smaller standard deviation an indication of strong agreement among respondents. This is an indication of the great contribution of technology towards improving efficiency in operations. The findings are summarized on the following table.

Statement	SA	A	N	D	SD	Mean	Std Dev.
Quality technology devices	75%	25%	0%	0%	0%	4.89	0.07
Faster and reliable internet	80%	20%	5%	0%	0%	4.91	0.05
Adoption of electronic data interchange	75%	25%	0%	0%	0%	4.89	0.07
Effective software for banking operations	85%	15%	0%	0%	0%	4.93	0.02

Effective and efficient communication technology in place	95%	5%	0%	0%	0%	4.96	0.02

SA-Strongly agree, A-agree, N-Neutral, D-Disagree, SD-Strongly disagree

Source: Field data, 2022

The third objective concentrated on establishing the effects of business process re-engineering on operational efficiency. The researcher sought opinion of respondents on various business process re-engineering techniques and practices to determine their effects on operational efficiency. Descriptive findings in the following table 4.8 indicated that respondents widely agreed that business process re-engineering is very integral in the achievement of operational efficiency in a company. However, 15%, 3% and 5% of respondents were undecided in circumstances of identification and implementation of new processes, adoption of electronic money transfers and service diversification respectively. The mean was nearly 5 with small standard deviation an indication of strong agreement among respondents with various business process re-engineering statements presented.

Statement	**SA**	**A**	**N**	**D**	**SD**	**Mean**	**Std Dev.**
Identification and implementation of new processes	30%	55%	15%	0%	0%	4.22	0.09
Service diversification	75%	20%	5%	0%	0%	4.81	0.04
Adoption of electronic mobile banking	90%	10%	0%	0%	0%	4.92	0.02
Maintaining better customer services	95%	5%	0%	0%	0%	4.95	0.01
Adoption of electronic money transfer	67%	30%	3%	0%	0%	4.63	0.13

SA-Strongly agree, A-agree, N-Neutral, D-Disagree, SD-Strongly disagree

Source: Field data, 2022

Correlation analysis

The researcher conducted correlational analysis to determine the degree and direction of association between independent variables and dependent variable. This was achieved by computing Pearson correlation coefficient between the variables. The findings indicated that Pearson correlation coefficient for recruitment and training, technology and business process re-engineering were 0.690, 0.750 and 0.560 which were all positive with Sig value of 0.001 for all the variables. The findings indeed indicate that recruitment and training and technology had strong positive correlation with operational efficiency while business process re-engineering had moderate positive association with operational efficiency.

Correlation Analysis

		Recruitment and training	technology	Business process re-engineering	Operational efficiency
Recruitment and training	Pearson Correlation	1	.187	.139	**.690**
	Sig. (2-tailed)		.062	.166	.001
	N	92	92	92	92
technology	Pearson Correlation	.187	1	.220*	**.750**
	Sig. (2-tailed)	.062		.028	.001
	N	92	92	92	92
Business process re-engineering	Pearson Correlation	.139	.220*	1	**.560**
	Sig. (2-tailed)	.166	.028		.001
	N	92	92	92	92
Operational efficiency	Pearson Correlation	**.690**	**.750**	**.560**	1
	Sig. (2-tailed)	.001	.001.	.001	
	N	92	92	92	92
Source: Field data, 2022					

SUMMARY OF FINDINGS

This research focused on investigating the effects of cost management strategies on operational efficiency of commercial banks with a case of Bank of Kigali. The cost management strategies of focus in this study comprised of recruitment and training, technology and business process re-engineering. The findings of this research were based on these objectives and they comprised of descriptive and inferential findings.

In regard to demographic findings, majority of managers were found to be men accounting for 60% while women were the minority accounting for 40%. The majority of managers of Bank of Kigali were found to have aged between 31-50 accounting for over 80% while below 30 years and above 50 years accounted for less than 20%. In terms of education qualifications, majority of managers were found to have post graduate qualifications though a significant percentage of managers were also found to have undergraduate qualifications. Lastly in terms of work experience, majority of BK managers were found to have work experience of more than 5 years.

The first objective was on the effect of recruitment and training on operational efficiency of commercial banks. Descriptive findings indicated that majority of respondents accounting for over 90% accepted that various activities regarding recruitment and training affects operational efficiency. Correlation analysis findings revealed that the Pearson's correlation coefficient between recruitment and training and operational efficiency was 0.69 showing that there is a strong positive association between recruitment and training and operational efficiency. Regression finings further revealed that the beta coefficient of recruitment and training was 0.110 or 11% with a significant value of 0.035 which is less than 0.05.

The second objective of the study looked at technology and operational efficiency. Descriptive findings revealed that a greater percentage of respondents more than 90% agreed that technology improvement efforts adopted by Bank of Kigali indeed have greater effect on its operational efficiency. Correlation analysis showed that the correlation coefficient between technology and operational efficiency is 0.75 which is highly positive and significant based on the significance value reported of 0. 001. Additionally, regression findings reported that the beta coefficient of technology is 0.183 equivalents to 18.3% with a significance value of 0.001.

Finally, the findings of the last objective which focused on business process re-engineering and operational efficiency revealed that respondents widely agreed with various efforts of business process re-engineering that they greatly affect operational efficiency. a greater percentage of respondents agreed that identification and implementation of new processes, adoption of electronic money transfer and mobile banking in addition to service diversification greatly improves operational efficiency. Correlation findings revealed Pearson's correlation coefficient value of 0.56 which is positive and significant. Regression findings further revealed a beta coefficient of 0.145 or 14.5% with a significance value of 0.001.

Conclusion

First, the study concludes that most managers are in the active working age bracket and are highly experienced based on their years of work experience with high education qualifications. This therefore implies that for someone to be appointed in the management position, work experience and education qualification matters a lot.

Secondly, the study concludes that keeping other factors constant, 1% change in recruitment and training, technology and business process re-engineering leads to 11%, 18.3% and 14.5% proportionate change in operational efficiency respectively. Therefore, it implies that technology has the greatest effect on operational efficiency of commercial banks. Furthermore, there is a high positive association between recruitment and training, technology and business process re-engineering and operational efficiency.

Lastly, the researcher concludes that cost management strategies play a big role in boosting operational efficiency in the banking institutions. In other words, there is high positive effect of cost management strategies on operational efficiency. Specifically, recruitment and training, technology and business process re-engineering greatly contributes in enhancing operational efficiency. More efforts diverted towards improving these three cost management strategies yields positive outcome in operational efficiency in terms of reduced operational costs.

Recommendations

The study came up with the following recommendations based on the findings and conclusions. These recommendations are necessary towards improving the operational efficiency in the banking sector and other sectors.

- First, this study recommends that commercial banks should be on the fore front in technological advancement. They should continuously adopt to the new technologies and also make efforts to ensure that they continuously upgrade their technological applications through innovation and invention. The IT department should be well resourced through financing and having competent human labor in place who work towards devising new ways of doing things in addition to upgrading the current technology in place. This goes a long way in saving them cost of operations and in addition to improved product and service quality hence achieving operational efficiency.
- Secondly there is need for banks to practice transparency and integrity in recruitment process. This will ensure that qualified personnel are brought on board who are able to drive institutions agenda hence achieving the intended company goal. In addition, training of staff should be taken as a matter of importance and should be done regularly under the leadership of competent team who are able to impart the right training skills so that the staff are able to acquire and apply the right skills conduct of the duties aimed at improving overall company performance of which operational efficiency forms part.
- Lastly this study recommends that banks and other companies should strive to adopt business process re-engineering techniques in the running of the company. Companies should strive to come up with new products and processes and diversify their operations in order to increase the customer base, retain the existing customers through better service delivery and offering of new products. Changing product design overtime and devising new processes in the manufacturing chain for manufacturing companies through innovation and invention is of great importance. This in turn imparts greatly to company's performance overtime.

References

1. Anderson (2007). *). Managing Costs and Cost Structure throughout the Value Chain: Research on Strategic Cost Management. Handbook of management accounting research.* Elsevier Ltd.
2. Andine & Julius. (2016). Role of Strategic Humana Resource Mnagement Practices on the Performance of Financial Institutions in Rwanda: Case Study of Bank of Kigali. *Academia Journal*.
3. Athanasoglou, Panayiotis, Delis, Manthos, Staikouras and Christos. (2006). *The determinants of bank profitability in the South Eastern European Region.* MRPA.
4. Ellram and Stanley. (2010). Integrating Strategic Cost Management with a 3DCE Environment:Strategies, practices and benefits. *Journal of Purchasing and Supply Management*.
5. Fatma & Aysel. (2017). Analysis of the relationship between Financial Innovation and the performance of Turkish Banking System. *International Review of Economics and Management*, Vol 5 No 3, Page 16-32.
6. Fellows & Liu. (2008). Ethics in Construction Project Briefing. *Journal of Science and Engineering Ethics*, 10(2), 289-302.
7. Gakwandi & Kule. (2017). Effect of Merger and Acquisition strategy on Fiancial Performance of Commercial Banks in Rwanda. *International Journal of Science and Research*, Vol 6 Issue 10.
8. Ogada and Magutu. (2017). Business process reengineering and organizational performance of commercial state corporations in Kenya. *University of Nairobi Repository*.
9. Ikechuwuku (2019). Effect of Bank Innovations on Financial performance of commercial banks in Nigeria. *European Journal of Accounting, Finance and Investement*, Vol 5 Issue 4.
10. Judith & Kibati. (2016). Influence of Innovation on the performance of commercial banks in Nakuru Central Business District. *IOSR Journal of Business and Management*, Vol 18 Issue 10.
11. Juma Wesuta. (2010). The Impact of ICT Adoption on Financial performance of commercial banks in Kenya. *University of Nairobi Repository*.
12. Kothari C.R. (2008). *Research Methodology: Methods and Techniques.* New Delhi, India: New Age International Publishers.
13. Kothari C.R. (2010). *Research Methodology: Methods and Techniques.* New Delhi, India: New Age International Publishers.
14. Kumar & Mishra. (2014). Business process reengineering BPR: An Empirical Study on state bank of India. *International Journal of Engineering and Management*, 95-99.
15. Mc Graw Hill. (2013). *Cost Management and Strategy.* Academia.
16. Mishra & Himanshu. (2010). Trends in Employees Cost, Productivity and Profitability: Gap Between Public and Private Sector Banks. *International Journal in Multidisciplinary and Academic Research* , Vol 2 No 3.
17. Moel & Tufano. (2002). When are Real Options Exercised. An Empirical Study of Mine Closings. *Review of Financial Studies*, 15(1), 35-64.
18. Moruff & Richard. (2017). Business Process Re-engineering and and Organizational performance in Nigeria deposit money banks. *Journal of Economics and Business Research*, Vol 23 No. 2.
19. Mugenda O.M & Mugenda A.G. (2010). *Research Methods:Qualitatitative and Quantitative Approaches.* Nairobi: African Centre for Technology Studies.
20. Munyaneza (2017). On the effectiveness of Bank Innovations on financial performance of bank of Kigali Ltd in Rwanda.(2009-2016). *Munich GRIN Verlag*.
21. Nadeem (2016). Impact of business process reengineering on the performance of banks in Pakistan. *Business and Economics Journal*.
22. Ngango & Shukla. (2013). *Effect of electronic banking on banking performance of commercial banks in Rwanda a case of BK.* JomoKenyatta University of Agriculture and Technology.
23. Nkiru & Okoye. (2015). Analysis of Cost Management on Performance of Corporate Firms in Nigeria. *Scholars Journal of Economics, Business and Management*, Vol 2 Issue 12.
24. Nora D.. (2014). Businesss process reengineering practices and performance of Kenya commercial bank. *University of Nairobi Repository*.

25. Oluwatayo (2012). Validity and Reliability Issues in Educational Research. *Journal of Educational and Social Research*, 2, 391-400.
26. Steliaros, Calleja and Thomas (2008). A Note on Cost Stickiness: Some International Comparisons. *Management Accounting Research*, 17(1), 127140.
27. Wanjiku & Josiah. (2014). Effect of Cost Management Strategies on the Financial Performance of Manufacturing Companies Listed on the Nairobi Securities Exchange. *University of Nairobi Repository*.
28. Zengin & Ada. (2010). Cost Management through product design: Target costing approach. *International Journal of Production Research*.