COST OPTIMIZATION AND OPERATIONAL COMPETITIVENESS AMONG PRIVATE SECURITY FIRMS IN NAIROBI COUNTY, KENYA

BY: NYAOGA A. PETER
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DEDICATION

This project is a special dedication to my dear wife Esther and my three sons, Ronny, Joshua and Emmanuel. Without their patience, support and encouragement it would have been impossible to complete this course.

DECLARATION

I the undersigned declare that this research project is my original work and has not been presented for the award of a degree in any other Institution.

Signed …… Date ……..

D61/70951/2009
NYAOGA A. PETER

This research proposal has been submitted for examination with our approval as University Supervisors.

Signed …….. Date ……

MAGUTU O. PETERSON

Lecturer, Department of Management Science, School of Business University of Nairobi

Signed …….. Date ……

AKELO O. ERNEST

Lecturer, Department of Management Science, School of Business University of Nairobi

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ABSTRACT

The purpose of the research study was to establish cost optimization practices and operational competitiveness in private security firms in Nairobi County. The research design employed was a census survey. A total of twenty nine private security companies who are members of KISA in Nairobi County were targeted. The respondents were the heads of departments in the security firms. Data was collected by mean of a questionnaire using a drop and pick later method. The response rate achieved was 54.3% and this was considered adequate for analysis and reporting.

The research study revealed that the firms that were surveyed 84.1% of the respondents were male while 15.9 % were female an indication that recruitment policies are not gender sensitive. It was also revealed that most of the heads of departments were aged over 30 years were 79.4%. Departmental heads with college and university education level was high at 89.5 %. The study revealed that a large number of the firms were either foreign or jointly owned by foreign and local. Out of the 29 companies surveyed 36.6 % were locally owned. Companies that were foreign owned accounted for 17.5% while 46 % were both local and foreign. The presence of foreign ownership heightened the level of competition to world class status. The research study also revealed that most heads of departments had worked for more than two years for their respective companies.

The research study revealed that the main services offered were private guarding, alarm response, dog services, training, cash- in-transit and courier services. Guarding service had a score of 4.7 measured on a scale of 1 to 5. (5= very large extent, 4=large extent, 3= moderate 2=least, 1=not used). Alarm response was 3.9, dog services, training 3.5, cash in transit 2.7 and a courier service was 2.7.other services proved but moderate extent included close protection, fire fighting events management escort services, facilities management, consultancy and investigation services. Cost optimization varied in extent with benchmarking ranking highest on a scale of 1 to 5 where 5 was to very large extent. Quality management had a score of 4.06, benchmarking 3.9, six-sigma 3.82, innovation 3.76, kaizen 3.71 and JIT 3.65. The researcher concluded that since the some of the practices had lower scores than others, there is need to use an approach that incorporates all the practices.

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CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Cost optimization is one of the tools that world class organizations are turning to enhance competitiveness in modern day business. Cost optimization is driven by the need for optimization on the total costs of purchased materials and services with the objective of improving on the overall cost position and customer value (Fernandez et al., 1995). The cost position of a company is closely related to the company's ability to efficiently use resources to obtain its objectives. The role of cost optimization is to enhance efficiency by seeking to minimize on the cost of inputs and improvement on system processes. The focus of cost optimization is waste elimination and profit maximization for the purpose of survival and growth (Maher, 1997).

The value of a service produced must exceed that of competitors and at a lower cost if the firm is to achieve competitive advantage (Barney, 2002). For a firm to prosper, it must not only create but sustain a sustained competitive advantage (Saloner, Shepard & Podolny, 2003). Modern customers are increasingly becoming more focused on value for their money. Customer expectations in the modern business environment is more dynamic and the worry of every operations manager is how to structure processes that can deliver value to customers in the market place, where competition is increasingly becoming intense and hostile. Cost optimization is a key guiding principle in any operational decision making process. Operations mangers are tasked with the responsibility of allocating various limited resources such as labour, materials, and money to different competing opportunities on an objective basis, in order to optimize on total costs.

1.1.1Cost Optimization Practices

Price from the buyer's perspective is the cost of production (Smith, 1976). "Production cost" is the value of a commodity plus the labor needed to make it (Ricardo, 1821). Cost optimization is critical to survival and growth in business because profitability increases when costs are reduced.Cost optimization practices used in organizations include; Benchmarking, Kaizen blitzes, JIT- Just in time, Business process re-engineering , Cost leadership, cost leadership, Differentiation, quality management, supply chain cost reduction ,six sigma, worker empowerment and waste reduction, Total cost ownership, waste reduction as a means of improving on productivity, Innovation, strategic sourcing and procurement. World class Companies and organizations have embraced and successfully used cost optimization practices as a tool for managing costs, reducing wastage and creating value for customers Cost optimization is often broad in scope and aims at cost management through sustainable practices. Cost optimization practices usually rely on mathematical linear programming models that seek to determine the most cost effective combination of resources required for production of a service or product (KPMG, 2011 and Kothari, 2007).

Cost cutting measures such as resorting to low quality raw materials, results into replacement, redo work, and other costs associated with inefficiency.The value of output in an operation transformation process is the cost of the product or service. Cost is one of the key variables that determine the competitiveness of an organization because costs determine a firms output, profitability and decision making (Saloner, Shepard & Podolny (2001).

1.1.2 Operational Competitiveness

Operations has a major influence on competitiveness through product and service design, cost, location, quality of service or product, response time, flexibility, inventory and supply chain management, and Quality, Process and capacity design, Human resource and job design, job and product design, Scheduling and Maintenance. Many of these attributes are interrelated and therefore require an integrated management process that seeks to synchronize the separate activities into a unified whole (Chase, Jacobs & Aquilano, 2006).

Operations managers are often faced with the challenge of how to structure processes that can deliver value to customers in the market place, where competition is increasingly becoming intense and hostile. The challenge facing organizations is how to trade off quality and cost, reliability and speed. The value of a service produced must exceed that of competitors, and at a lower cost. The evolution and development of new management practices such as JIT (just in time), quality management, kaizen, worker empowerment as a means of improving on productivity and customer orientation have all been aimed at creating competitive advantage (Richard P et al., 2003).

Overall five key factors that reflect the measures of operation competitiveness are; low cost, high quality, delivery, flexibility, and innovativeness (Hayes & Wheelwright, 1984; Leong, Snyder, & Ward, 1990; Ward, Duray, Leong, & Sum, 1995). The measurement of competitiveness in service operations requires a consideration of tools and techniques that service operations such as work scheduling, service quality management, service standards and performance measurement systems. A theoretical service model proposed by Roth et al., (1997), Oloveira et al., Argote et al.,(2002,1999), that is based on value constellations of value drivers and results is proposed for the study. The model is based

on a framework that addresses value specific infrastructural issues that targets people, leadership, service culture and orientation, service processes, culture and orientation. The model proposed addresses issues that relate to quality, reward system, product development and productivity objectives.

1.1.3 Private Security Firms In Nairobi County, Kenya

Private security firms mean a body corporate, including a partnership, which provides private security services. The main role of private security firms is to supplement the gap left due the inadequate capacity of government security and policing (Kenya security Bill, 2010).

The services provided by the security companies range from manned guarding, dog handling, installation of electronic surveillance systems, alarm systems, escort services, cash-in-transit, close protection, fire fighting, ambulance & paramedic, events safety, training, facilities management, investigation and consulting services. Some of the companies provide courier services as a value added product. The number of firms operating in Nairobi County is over 500 (KSIA, 2012). The companies range from multinational companies capable of offering integrated security solution services, with clear management structures and operational systems, to individual briefcase carriers lacking in management systems and structures. The industry is characterized by high levels of competition especially in manned guarding which does not require high start up costs. Charges on customers for a single security guard range from KES 6000 to KES 2500 for a single guard (KSIA, 2012).

Operational issues in the industry include work force scheduling, inventory management, procurement of human resources and facilities, high operating overheads. The established

companies operate in more than one location and the challenge faced is the layout of facilities and distribution logistics. Flexibility and responsiveness is critical in crime deterrence and the layout and operations should be specifically geared to ensuring that customer response time is kept to the minimum.

Quality management and assurance of standards in private security firms is more restricted to internal management processes. Few companies subscribe to ISO as a bench mark for quality in services. KSIA which is an association of private security companies does not exercise control over operations and standards relating to customer service and management (Sabala, 2007)

1.2 Statement of the Problem

The practice of cost optimization is prevalent in top world class corporations that seek to deliver superior customer value through the management of costs in the entire value chain. Significant cost savings are realized by increasing efficiency in operations through cost optimization practices (Harkett, 2012).

The private security industry is one of the fastest growing sectors of the economy, having grown by more than 500% in the last ten years (Mkutu, 2012). The huge number of players and competition has put pressure on private security companies who must balance between profit and service quality. Customers whose needs and expectations are ever changing will always demand superior quality products and services at lower prices (Rajiv et al., 1995). One of key challenges facing the private security industry is the mushrooming of briefcase carriers who lack capacity, tools and the necessary skills seek to expand their market share through price undercutting (KSIA, 2012). The existence of large number of players and the price undercutting are a big challenge to the private

security firms hence the need to optimize on the costs of operations in an effort to remain competitive in a sector whose rate of growth is steadily upraising. It is against this contextual observation that necessitates a study to determine the effect of cost optimization on operational competitiveness of the firms in the private security provision industry.

A study conducted by Zweibel (2000) found out that materials inventory have an overwhelming cost-driver in the manufacturing sector especially on issues associated with their optimization and recommended that such issues should be examined as soon as possible in order to meet the long-term goals for module costs. However this study is in the manufacturing sector hence the need to test the concept of cost optimization among security service providers. Also Ramachandran (2005) in his study argued that by setting up a system that allows tickets to be booked via the Internet goes a long way and made much savings on its own reservation and ticket distribution system. However this study was on airline industry but the findings can be tested on private security industry.

Another study conducted by Valenzi (2008) concluded that 90% of all companies do not track printing costs while most companies could reduce their printing costs by 10–30%. This study was however in the printing industry. But the 90% bracket of firms not tracking their costs can be tested in the private security firms in Nairobi County, Kenya.

Futher Feng et al., (2013) in their study found out that both customer involvement and supplier involvement have significant effects on internal integration. Internal integration has a significant effect on operational performance. But these were on the link between internal integration and operational performance. The current study will borrow from the measures of operational performance. Further, another study done by Toensmeier (2013)

concluded that profitability can be improved and sustained through cost optimization. But this study focused on a narrow view (profitability) of operational performance.

The above studies by Feng et al., (2013), Valenzi (2008) and Toensmeier (2013) were a motivation to conduct a study to test whether cost optimization can lead to operational competitiveness. The gap left by Ramachandran (2005) and Zweibel, (2000) posed the following research questions to be answered by the intended study; what are the cost optimization strategies used by private security firms in Nairobi County, Kenya? And is there a relationship between cost optimization practices and operational competitiveness of private security firms in Nairobi County, Kenya?

1.3 Objectives Of The Study

The objectives of the study was:

(i) To establish cost optimization strategies used by private security firms in Nairobi County, Kenya;

(ii) To determine the relationship between cost optimization practices and operational competitiveness of private security firms in Nairobi County, Kenya

1.4 Importance of the Study

The research study will generate knowledge valuable that will be beneficial to both scholars and members of the academic community. The gaps identified in this research study will be used as a basis for further research.

The research findings shall be helpful to investors and private security operators who will benefit from cost optimization practices as applied in the industry to enhance their competitiveness. The research study is also intended to addresses issues of best operational management practices which will address both the customer needs and the

needs of the shareholders.

It is envisaged that the findings from this study will be beneficial to policy makers and the government on how to address challenges facing the private security industry in Nairobi County and the rest of the country in general.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter is to introduce the concept of cost optimization and explore various past studies on cost optimization practices and how they enhance operational competitiveness in various industries.

2.2 Cost Optimization

Cost optimization is a business strategy that whose goal is to enhance profit margins through strategically adopting long approaches to cost management in operations. Severe competition, changing customer expectations and demands make it mandatory for private security companies to embrace cost optimization as a means of managing costs in service provision (Chase et al, 2006).

A service system delivery design should have the not only the quality implication in mind but the market competition as well. The term service concept is defined as the total bundle of goods and services sold to the customer and the relative importance of each to the customer (Sasser et al., 1978).The service concept provides is a key driver of competitiveness in the security industry which is service industry. According to Sasser (1978) services, the service concept plays a role which is different from manufacturing in sense that the product is created in the process of interaction with the customer.

2.3 Cost Optimization Practices

Cost optimization is an operational strategy that seeks to minimize costs, and enhancing margins. The objective of the strategy is to create value in the supply chain by eliminating activities that not essential. The goal of cost optimization is to save on costs that are associated with providing service by managing costs of the transformation

process so as to achieve the lowest total cost ownership. The entire business process network is integrated into cost saving by optimizing on costs.

Tavares (2000) argues that technology is a leading driving force in the modern businesses environment. One of the key competitive priorities in modern business is speed. Despite of high initial costs associated with technology acquisitions, the long run cost savings and contribution towards achieving competitive advantage can be enormous. Technology is made up of discoveries in sciences, product development and improvement in machinery, process, and automation. It also includes a combination of knowledge, information and ideas. Murungi (2003)

2.3.1 Cost Optimization Through Benchmarking

Benchmarking when translated from Japanese word *dantotsu* means striving to be the best of the best (Camp.et al.,1989). The philosophy of benchmarking is based on learning from competitors to enhance organizational capability and competitiveness. Companies that seek to win the competition game must be ready to learn practices that are applied in the best of class firms. According to Camp (1993) American companies were losing to Japanese companies such as Toyota in competitiveness because they wrongly assumed that they were the best. The Japanese on the other hand were keen to learn from western and American competitors (Camp 1989). Camp in his view defined Benchmarking as "the continuous process of measuring our products services, and practices against the toughest competitors or those companies recognized as industry leaders. From the foregoing it can be argued that to gain excellence in cost optimization, companies do not have much choice but to bench mark with the best. Benchmarking has also been defined as is a continuous, systematic process for evaluating the products, services, and work

processes of organizations that are recognized as representing the best practices for the purpose of organizational improvement (Spendolini,1992). What is evident is that companies must continuously evaluate their performance because competition is dynamic. Improvement is a key component of survival and growth and therefore companies must seek to continuously improve on cost optimization

Bench marking according to research studies can only on succeed when well understood and adapted. According to Watson (1993), benchmarking should be adapted rather than adopted. Copying practices or practices without adjusting to organizational needs and objectives may be disastrous. The purpose of compulsion should be to identify own weaknesses and seek to improve and to outperform the competitors.

2.3.2 Cost Optimization Through Process Re- Engineering

Business process re-engineering (BPR) concept is based on precept that the creation of products and services is dependent on a set of processes. Business process can be decomposed into specific activities, measured, modelled, and improved. It can also be completely redesigned or eliminated altogether. Reengineering identifies, analyzes, and redesigns an organization's core business processes with the aim of redesigning the whole process so that the work processes are aligned with the objectives of the organization and the changing business environment. According to Turnery(1996), the process view of an organization reflects the need for organizations to analyse as separate the entities that and the activities that are involved in product and service creation and how efficiently they done. According to CIMA (2012), Organisations are moving from vertical to horizontal management as a way of increasing efficiency and optimizing on costs managing vertically.

2.3.3 Cost Optimization through JIT (Just In Time)

The Just-in-Time (JIT) management approach initially was introduced in Japan in 1950s has proved to be a powerful tool for cost optimization. JIT focuses on business processes rather than products. The approach was adopted by Toyota and many Japanese manufacturing establishments with considerable success in raising productivity by eliminating waste Manufacturing plants have successfully used the JIT approach to increase their competitiveness in the world market (Kaneko and Nojiri, 2008).

Waste in Japan, as defined by Toyota's Fujio Cho, is 'anything other than the minimum amount of equipment, materials, parts, and workers (working time) which are absolutely essential to production'. The management philosophy underlying JIT is to continuously search for ways to make processes more efficient with the ultimate goal of producing goods or services without incurring any waste cost optimization in private security companies can be achieved through identifying processes that are responsible for waste. Work scheduling, training of staff and recruitment should be done with optimization of costs in mind (Chase et al., 2006).

JIT is an integrated, problem-solving management approach aimed at improving quality and facilitating timeliness in supply, production and distribution (Davy et al., 1992).The success of JIT as a tool for cost optimization requires that all employees and departments be trained and conscious of the potential benefits of JIT in increasing quality, profitability and increasing competitiveness. All departments in the security, right from human resource, marketing, operations, finance and logistics should be trained in the JIT management approach. The success Toyota motor vehicle manufacturer in cost optimization through the use of JIT is because all departments and individuals were incorporated. Studies done reveal that there is a close relationship between profit margins

and the use of the application of JIT Companies that apply JIT usually tend to have higher profit margins.The "Just-in-time JIT" process emerged as a result of the focus on improving operational efficiency by reducing inventory to the bare minimum. The supply of inventory in JIT is delivered just when it is needed for a process thus eliminating holding costs of inventory (Kinney & Wempe, 2002).

2.3.4 Cost Optimization Through Kaizen

Kaizen is a derivative of a Japanese word, KAI which means improvement and Zen which means good. The kaizen concept is based on philosophy of small but sustained incremental improvements. Kaizen has also been defined as everyday improvement, everybody improvement and everywhere improvement. It is a management philosophy which believes that no process is perfect, that improvement is always possible. Kaizen is based on three main principles namely focusing on results and processes, systematic thinking and learning method. Cost optimization through kaizen seeks to create small cost savings through the entire process of the organization, sustaining the improvements and working to better the achieved status. The first principle to be considered in the kaizen management philosophy is to identify the expected results and the process used to achieve the results with the aim of modifying the process to achieve the expected results. Kaizen philosophy does not separate the result from the process. The second principle is to examine the entire process to identify flows while the last principles to have everyone own the process and avoid apportioning blame. Kaizen encourages the creation strong teams. The Kaizen philosophy is a system wide approach that seeks to increase efficiency through low and affordable procedures. The greatest success stories cost optimization is the approach used by Toyota in their manufacturing process. The approach can also be

used is service industries (Grace, 2010).

The four cost optimization processes based on kaizen are; having a long-term philosophy that drives a long-term approach to building a learning organization, The right process will produce the right results, Add value to the organization by developing its people and partners, Continuously solving root problems to drive organizational learning Imai argues that an organization cannot remain competitive if it does not work towards improvement as the business environment changes. (Imai, 1985).

Organizations that have made a difference in cost optimization strategies either in service or manufacturing have been known to use kaizen approach and philosophy to management. According to Imai (1986), successful processes such continuous quality improvement,(CQI), Just-in-time(JIT), operational excellence(OE),six-sigma, lean manufacturing , total quality control (TQC) are customer focused, Gumba(waste elimination) and kaizen oriented.

2.3.5 Cost Optimization through Innovation

Innovation has been defined in different ways by different scholars. According to Altschuler and Zegans (1997), innovation is novelty inaction, while Mulgan and Albury (2003) argue that innovation represents ideas that work. Worlf (1994) proposes that there is product, service and process types of innovations .Business organizations can take advantage of each facet of innovation and seek to achieve competitiveness through integration of various technologies.

Cost optimization through innovation is quickly changing the way business thinking in the modern business. Companies are renewing their focus on product and process innovation as a way of improving their cost positions in the market place. A survey done

by EIU (2012) on top 241 companies drawn from Europe, Asia-Pacific and North America concluded that they were in early their early stages of major product innovation. The CEOs surveyed indicated that they were keenly aware that while shrewd cost management will always be near the top of their agenda, their top-line and bottom-line growth objectives can only be met with innovative, market leading products and related service. One notable development is the emergence of transformational innovation based on closer collaboration across the supply chain. Companies are working towards enhancing their product lines while cutting costs via process innovation (Fisher, 2O12). The factory of the future will be one in which every step of production process is optimized using innovative software systems (Russwurm, 2013).

2.3.6 Cost Optimization through Quality Management

Cost optimization through quality management may not be comprehended without capturing the meaning of quality. Several definitions have been provided for quality. Quality is the ‘conformance to requirements’ (Crosby, 1984). Deming (1986) defines quality as a predictable degree of uniformity and dependability, at low cost and suited to the market. Customers evaluate the quality of a product based a number of factors key among them dependability and cost. Companies should therefore focus not only the dependability but the price as well. Juran (1988) defined quality as ‘fitness for use which results in customer satisfaction freedom from product deficiencies, which avoids customer dissatisfaction’. Quality can also be defined as the extent to products exceed customer needs and expectations which users of a product or service. (Gitlow et al., 1989).

Quality management is a process for ensuring the services and products offered

consistently meet the stated standards. Quality management is fundamental for leading and operating an organization to continually improve performance over the long term by focusing on customers while addressing the needs of all other stake holders (Chase, Jacobs & Aquilano, 2006).

Quality management optimizes on costs by reducing cost of rework and customer complaints. Various management approaches have been used. The need for quality management is based on the realization quality is not an accident but must be planned for. There exists various theories on quality management, but they all highlight eight key dimensions that companies should focus on. The principles include Customer focus, leadership, Involvement of People, Process approach, System approach to Management, Continuous improvement, factual approach to Decision making and Mutually Beneficial Supplier Relationships. Some of the frameworks for quality management include TQM(total quality management), ISO(international organization standards), Quality assurance, Kaizen, total quality control. Key contributors to quality management theories and philosophies are; Walter Andrew Shewhart (1924), W Joseph Juran (1924), Philip B. Crosby(1984), Kaoru Ishikawa(1989), Edwards Deming(1950),

2.3.7 Cost Optimization through Six Sigma

Cost optimization through sigma is based on a philosophy that aims at having no defects. Six- sigma is a process thinking approach which seeks to make the process of service or product delivery flawless. Six -sigma is based on a defect rate of 3.4 for every one million parts, statistical measurement of deviation of the process from normal and a philosophy that seeks to address cost by reducing process and system variability. Six - sigma is ‘a comprehensive and flexible system for achieving, sustaining and maximizing

business success. Six- Sigma is uniquely driven by close understanding of customer needs, disciplined use of facts, data, and statistical analysis, and diligent attention to managing, improving, and reinventing business processes' (Pande et al., 2000). A strong structure and clear alignment to organizational goals (particularly financial) are a key part of the Six Sigma approach as defined (Eckes, 2001).There is evidence to suggest that financial benefits of Six Sigma; with the savings achieved due to decrease in operational costs, reduction in scrap and rework rates. The process is important because the output is determined by the process capability. Tools employed to monitor quality in six sigma are control charts, pareto analysis and charts, process mapping, root cause analysis and statistical process control (Lee, 2002).

2.4 Operational Competitiveness

In a business environment that that is growing increasingly turbulent by the day, dynamic capabilities, flexibility, agility, speed, and adaptability are becoming more important sources of competitiveness(Barney, 2001& Sushil, 2000). Firms that seek to be competitive need to diversify by broadening their scope to satisfy dynamic customer needs and expectations. Research studies done by O'Farell et al., (1992, 1989,1988) reveal that there exists a close relationship between the competitiveness of a firm and its performance in relation to other variables such as have conducted a number of on price, quality, design, marketing, flexibility, and management.

All business firms on a day to day basis engage in the transformation of resources into goods and services of value for their customers, through a combination of processes aimed at adding value. A bench marking survey analysis at Nokia-Siemens (2007) revealed that profitability in the service industry providers will go up by 13% if

performance operated at the same level of performance as industry leaders. The findings implication of the study is that most firms make losses and therefore cannot pay higher wages to workers because of internal and external operational efficiencies that cost them in terms of profits. It has also been argued further that when a firm earns a higher rate of economic profit than the average rate of economic profit of other firms competing within the same market, the firm is said to enjoy a competitive advantage in that market (Besanko, Dranove, & Shanley 2000: 389). Operational efficiency addresses the issue of waste minimization and at same time maximization of resource capabilities. This strategy has the ability of passing on the accrued benefits to consumers by way of delivering high quality products to customers at lower costs. Service oriented firms can deliver superior value to customers by focusing on efficiency along their value chains.

Private Security companies can advantage of tested and resource saving management practices to improve on their performance. Operational efficiency is concerned with identifying wasteful processes and resources that drain the organization's profits. Operational efficiency is also concerned with designing new work processes that improve quality and productivity.

The Present competitive environment in business requires companies to introduce quality products at lower prices in order to capture market share. Globally, business has become more integrated with supply chains crossing multiple nations. Inefficiency in this chain and internal drain of resources due to outdated processes affect the ability of a company to be profitable. Operational efficiency is therefore a critical system wide initiative that can translate to the company being in business or closing down.

2.5 Explanation of the Conceptual Framework

Competitive advantage between firms is a measure of the difference in value of our given similar input combination of resources. The difference can be measured in monetary terms. The competitive advantage should result in the maximization of the difference between the monetary equivalent of the output (service) and the revenues .The difference in the two parameters is as a result of the interaction between the labor and facilities of the consumers will pay for value generated and the maximum they pay will be a function of offerings from competing companies.

The firm must therefore seek to optimize on costs to maximize their margins. The staff productivity will be a function of the resources and the operating environment. The operating environment will include the work load and facilities and work conditions.

Staff and resources must be appropriately combined in a manner that maximizes capacity utilization and, and effectiveness. The firm should not keep underutilized facilities such as vehicles so that the returns on investments can be maximized. The transformation process results in the services offered by private security companies which customers pay for. The service provided will be evaluated by the consumers on a number of competitive priorities will quality, speed, reliability

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction

This section presents the research methodology. It describes the research design and research instruments. Data collection procedures and data analysis techniques are also presented.

3.1 Research Design

The study adopted a descriptive census survey study design approach. It involved the collection of data through multiple sources such as verbal reports, personal interviews and observation. Secondary information was obtained through published report such as operations reports, financial reports, budgets, and market competition.

3.2 The Population

The population of study was drawn from private security companies in Nairobi County, Kenya who are members of Kenya private security industry association KISA (Appendix I). The respondents of the study were heads of departments in each company under KISA umbrella.

3.4 Data Collection

The study used both primary and secondary for the purpose of increasing reliability of collected data. A self completion questionnaire with both open ended and closed questions was used. A drop and pick later method was used. The researcher collected information from heads of departments through the questionnaires which was distributed to heads of departments across each firm branch networks in Nairobi County, Kenya.

3.5 Data Analysis

A statistical package for social sciences (SPSS) was used for this purpose. After questionnaires were collected, they were screened for completeness and accuracy before coding is done for analysis. Descriptive statistics was used to establish the means, frequencies and to determine the weights and distributions of the various parameters relevant to the research study. Presentation was in the form of charts and tables. Factor analysis on cost optimization practices were also used to reduce the dimensionality of the factors used in the study. The independent variables were the cost optimization practices under the study. The practices represented by X_1, X_2, X_3, X_4 .....X_n will be tested using questionnaire. A regression analysis model $Y=f(X_i)$, $Y = B_0 + B_1x_1+B_2x_2+B_3x_3 +.....+ B_{10}x_{10}+ ε$ shall be used to establish the relationship between competitiveness and the cost optimization practices. B_0 is the intercept point of the regression model while ε is an error term. The values B_1, B_2, B_3…..B_{10} are the regression coefficients for the model.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1. Introduction.

This chapter presents the results of the analyzed data, together with the appropriate interpretations that seeks to answer the questions raised under the research study. The purpose of the research study was to establish the relationship between cost optimization practices and operational competitiveness as applied by private security firms in Nairobi County, Kenya. The private security firms that were used under the research were those registered with KISA.

4.2. Response Rate.

The research study sought to find out the relationship between cost optimization practices and operational competitiveness among private security firms operating in Nairobi County, Kenya. A sample size of 116 respondents comprising of senior members of staff (heads of departments) was selected for the study. Out of the 116 questionnaires issued to heads of departments, 63(54.3%) usable questionnaires were recovered. According to Mugenda and Mugenda (1999), a response rate of 50% is adequate for analysis and reporting. The response rate achieved was therefore considered adequate for answering the questions raised under the research study.

4.2.0 General information about the respondents

The general information of the respondents who were working as heads of departments was important to the researcher. The researcher wanted to know about the general characteristics of the heads of departments since this would influence the reliability and accuracy of the responses. The respondents were therefore required to indicate their gender, education level, and the departments they worked under. The number of years

they had worked for the company was important as the researcher wanted to be sure they had worked long enough to comprehend the practices used for cost optimization and how these practices affected the competitiveness of the organization.

4.2.1. Demographic data

The department of the respondents was important to the research study because these are the people directly or indirectly involved for the implementation of policies and practices that are geared to cost optimization practices and competitiveness. Table 4.2.1 shows the summary of the respondents and their gender

4.2.2 Summary of respondents by gender

The gender of the respondents was important to the study because the researcher wanted to establish if the firms had any form of preference for gender since the private security industry has for long been a preserve of men. The respondents were asked to indicate their gender and the findings are as in the table 4.2.1 below

Table 4.2.1 Gender of respondents

gender	frequency	percentage
male	53	84.1
female	10	15.9
Total	63	100.0

Source; Research data 2013

The research findings revealed that majority of the heads of department were male.

Out of the 63 respondents, 53(84.1%) were found to be male while 10(15. %) were female. The research study findings were consistent with the employee patterns in the security industry which is dominated by males. Employment is heavily skewed in favour of men and this can be can be explained by the masculine nature of the work requirement

in service operations for most security assignments which are still dependent on physical deterrence of crime.

4.2.3 Age of respondents

The age of the respondents was important to the study because the researcher was keen to know that the respondents were mature and well conversant with the issues under investigation based on their experience. The respondents were asked to indicate their age bracket and the findings are as in the table 4.2.2 below.

Table 4.2.2 Age of respondents

age	frequency	percent	cumulative percent
21-30	13	20.6	20.6
31-40	19	30.2	50.8
41-50	25	39.7	90.5
51-60	6	9.5	100.0
Total	63	100.0	

Source; Research data 2013

The findings revealed that majority of the respondents were aged more than 30 years. Table 4.2.2 shows the summary of ages of the respondents. Majority of the respondents across the departments who were in senior positions were mature and it would be concluded that age was a factor in determining consideration for management positions. This can also be explained by the fact that older workers tend to be more experienced. The highest concentration of workers was in the age bracket of 41-50 which had 25(39.7%). The age bracket of 51-60 had the least number of workers, which implies that the security companies tend to rely on younger people who are active in line with the demanding nature of the private security industry. The observed trend can also be explained by the fact that most companies would promote their workers who had worked for long with them.

4.2.4 Education level of respondents

The education level of the respondents was important for the research study. This is because partly the understanding and applying cost optimization and best practices in industry requires a work force that is well informed intellectually. The researcher therefore asked the respondents to indicate their highest education standard and the findings are as in the table 4.2.3 below.

Table 4.2.3 Education level of respondents

education level	*frequency*	*percentage*	*cumulative percent*
secondary	*6*	*9.5*	*9.5*
university	*21*	*33.3*	*42.9*
college	*36*	*57.1*	*100.0*
Total	*63*	*100.0*	

Source; Research data, 2013

The research findings revealed that workers holding management positions were educated to at least college level 36(57.1%). There were 21(33.3%) of the respondents who were educated to college level. The respondents with secondary education were the minority 6(9.5%)

4.2.5 Department of respondent

A department is a distinct, usually specialized functional area within a large organization such as accounting, marketing, planning, operations, marketing among others. The researcher requested the respondents to indicate their department and the findings were as in the table below

Table 4.2.4 Department of respondents

Department	*Frequency*	*Percent*	*Cumulative Percent*
Human Resource	8	12.7	12.7
Marketing	10	15.9	28.6
Procurement	12	19.0	47.6
Training	6	9.5	57.1
Accounting	6	9.5	66.7
Operations	21	33.3	100.0
Total	63	100.0	

Source; Research data, 2013.

The research study revealed that majority of respondents worked in the operations departments which had 21(33.3%) of the respondents. Training and accounting had the least number of respondents at 6(9.5%) each followed by human resource, marketing and procurement which had 8(12.7%), (15.9%) and 12(19.0%) respectively. The researcher was satisfied that views collected were a good representation of the cost optimization practices at security companies that were under investigation. This information was necessary because the researcher was interested in collecting views on cost optimization practices across departments within security companies since cost optimization is a companywide process.

4.2.6 Company ownership

Company ownership is the ultimate and exclusive right conferred by a lawful claim or title, and subject to certain restrictions to enjoy, occupy, possess, rent or sell a thing. The researcher was interested to know the company ownership under the study. The respondents were asked to indicate the ownership of the company they work in and the findings were as below

Table 4.2.5 Ownership structure

ownership structure	*frequency*	*percent*
local	10	36.5
foreign	06	17.5
local and foreign	13	46.0
Total	29	100.0

Source; Research data 2013

The findings did reveal that a significantly high number of the top companies operating in Nairobi were either foreign or a mixture of foreign and local. Companies that were purely locally owned were 10(36.5) % while 13(46%) had a mixture of local and foreign ownership. The companies with the least ownership structure comprises of 06(17.5 %.) It was safe to conclude that the industry having been able to attract international players, competition was likely to be intense in areas of standards, practices and technological innovations.

4.2.7 Work experience of the respondents

The number of years worked was important for this research study because to answer the required questions correctly, respondents needed to have a good knowledge of operations at their companies. The respondents were required to indicate the duration for which they had worked as HODs (heads of departments). The findings were as in table 4.2.6 shows.

Table 4.2.6 work experience

	Frequency	Percent	Valid Percent	Cumulative Percent
less 1 year	16	25.4	25.4	25.4
2-5	12	19.0	19.0	100.0
above 11	6	9.5	9.5	81.0
Total	63	100.0	100.0	

4.3.1 The nature of services offered by the security companies

There are several services ranging from guarding to ambulance services that can be offered by private security firm. The researcher was interested to know the extent to which various components of security activities are practised by security companies. A scale of 1-5 was used where 5=very great extent, 4=great extent, 3=moderate, 2=small extent and 1=very small extent. This was with the view of establishing the core and non core activities at the security companies. The respondents were required to rank on a scale of 1 to 5 the extent to which each of the identified parameters was practiced and the findings are as in the table 4.3.1 below.

Table 4.3.1 Security Activities

security activity	N	Minimum	Maximum	Mean	Std. Deviation
Guarding Service	*63*	*4.00*	*5.00*	*4.7460*	*.43878*
Alarm Response	*63*	*3.00*	*5.00*	*3.9206*	*.51749*
Dog Service	*63*	*3.00*	*4.00*	*3.6508*	*.48055*
Training	*63*	*1.00*	*4.00*	*3.4921*	*.96508*
Cash In Transit	*63*	*1.00*	*4.00*	*2.7302*	*.84637*
Fire	*63*	*1.00*	*4.00*	*2.6667*	*.87988*
Courier Services	*63*	*1.00*	*4.00*	*2.6349*	*1.15426*
Facility Management	*63*	*1.00*	*5.00*	*2.5714*	*1.13186*
Consultancy	*63*	*1.00*	*4.00*	*2.3016*	*.96110*
Escort Service	*63*	*1.00*	*4.00*	*2.2857*	*.94063*
Investigation Services	*63*	*1.00*	*3.00*	*2.2063*	*.72198*
Events Management	*63*	*1.00*	*4.00*	*2.1905*	*.83968*
Close Protection	*63*	*1.00*	*4.00*	*2.1111*	*.80545*
Ambulance	*63*	*1.00*	*4.00*	*1.9365*	*1.01398*
Valid N (Listwise)	*63*				

Source; research data 2013

The highest ranking of 5 was to imply that the company practiced the activity to a very large extent while 1 was very little extent. Guarding services was found to be the key and core service activity with a score of (μ=4.75, s=0.44). The high score of almost 5 and low standard deviation implies that all companies have guarding services as their business activity. Alarm response and dog services were equally key components of private security companies as they ranked second and third respectively. The use of dog services can be explained by the increasing levels of violent crime and the fact that guards are not licensed to carry guns. Services that were not core to most companies included ambulance services, close protection, events management, investigation services, consultancy services and facilities management. These services had scores ranging

between 1.94 and 2.31 respectively. The researcher therefore concluded that these services did not have high demand or were not considered as strong competitive dimensions. Cash in transit and fire fighting were regarded as important and their mean scores were (μ= 2.73, s= 0.85), and (μ2.67, s=0.88)respectively.

4.3.2 Strategy on cost minimization

A strategy is the overall scope and direction of a corporation and the way in which its various business operations work together to achieve particular goals (Peterraf, 1993).

The researcher requested the respondents to indicate if their companies had strategies on cost minimization and enhancing the firm's margins and the findings are as in the table 4.3.3 below.

Table 4.3.3 table on strategy of cost minimization

Existence Of Strategy	***Frequency***	***Percent***
Yes	*58*	*92.1*
No	*5*	*7.9*
Total	*63*	*100.0*

This was important because this was the core of the research study. The responses given indicated that all companies had strategies to optimize on costs.

What was evident from the research study was that all companies had recognized the need to minimize costs as a result of stiff competition in the industry. An overwhelming majority of the respondents interviewed 58(92.1%) indicated that there existed strategies on cost minimization. Only five 5(7.9%) of the respondents indicated that there was no strategy.

4.3.4 Strategy on eliminating Non essential services

The researcher required the respondent to indicate if the elimination non essential service was part of a cost optimization strategy and enhancing of competitiveness in their companies and the findings are as in the table 4.3.4 below.

Table 4.3.4 strategy of eliminating essential services

Elimination Strategy	*Frequency*	*Percent*
Yes	*53*	*84.1*
No	*10*	*15.9*
Total	*63*	*100.0*

Source; research data 2013

The findings revealed that majority of the respondents 53(84.1%) did confirm that elimination of non essential services was one of the strategies used to manage costs and enhance competitiveness.

4.3.5 Benchmarking Practices

Private security firms need to benchmark with the best in industry. There are various benchmarking practices. The researcher therefore asked the respondents to indicate the extent to which various benchmarking marking practices were applied in their organization and the findings are as in the table 4.3.5 below.

parameter	N	Mean		Std. Deviation	Variance
	Statistic	Statistic	Std. Error	Statistic	Statistic
Evaluate Business Processes	63	4.0952	.06680	.53019	.281
Learn From Competitors To Improve	63	4.0000	.00000	.00000	.000
Seek To Improve On Cost Optimization	63	3.9841	.07671	.60886	.371
Adopted Best Practices	63	3.9048	.06680	.53019	.281
Continuously Measures Products And Services	63	3.8095	.04987	.39583	.157
Learn To Improve Competitiveness	63	3.6349	.06114	.48532	.236
Total	63				

Source; research data, 2013.

Among the parameters under investigation were business processes, learning from competitors, improvement approaches, adopting best practices and continuous improvement on products and services. A measurement scale of 1 to 5 where, 1 implied very little, 2 was little extent, 3 was to some extent, 4 large extent and 5 was to very large extent.

What evidently clear from the research study was that all companies sought to learn from their competitors on how best to optimize costs. The mean obtained for this measure was

(μ=4.0,s=0.00). The researcher therefore concluded that this parameter was applied to a large extent. The other parameters under investigation also were noted to be applied a large extent, with averages ranging from 3.63 to 4.10. It was therefore the opinion of the researcher that bench marking was a key component of cost optimization practice amongst private security companies in Nairobi County.

4.3.6 JIT practices

Indeed JIT is an integrated, problem-solving management approach aimed at improving quality and facilitating timeliness in supply, production and distribution.

The researcher was interested to know if the security companies selected were using JIT and the findings are as in the table below.

Table 4.3.6 JIT practices

	N	Minimum	Maximum	Mean	Std. Deviation
periodically trains staff	63	3.00	5.00	3.8254	.83356
all departments involved in improving quality	63	2.00	5.00	3.8254	.85269
search for ways to make process more efficient	63	1.00	5.00	3.6825	.94741
timeliness in supply and distribution	63	2.00	5.00	3.6667	.98374
minimize idle time	63	2.00	5.00	3.2508	.90087
just when needed for use	63	1.00	5.00	3.6349	1.09694
Valid N (listwise)	63				

Source; research data 2013

This is a cost optimization technique that largely relies on a pull and push inventory management. The organization using JIT uses idle inventory to bare minimum. This system of management ensures that costs are optimized through elimination of cost such as storage, damage to goods in store, obsolesce and theft.

Under the parameter of JIT the research asked the respondent to show the extent to which JIT was used for cost optimization (scale; 5= to very large extent, 1= very little extent). The findings reveal that JIT was used to a large extent by the security companies in Nairobi. Training of staff periodically and involving all departments in cost optimization techniques had means of 3.825 each. Other parameters used were timeliness on supply and distribution, minimizing of idle time, and looking for ways of to make processes more efficient. The mean scores for the mentioned parameters had little or no significant differences with each requisite being ranked between (μ=3.6, s=1.1) and (μ=3.83, s=0.83).Training of staff had the least variance meaning training of staff to acquire the requisite skills was considered important in cost optimization.

4.3.7 Kaizen practices

Kaizen practices actually aims at continuous improvement and problem solving. The researcher was interested to know the extent to which kaizen was used as a tool for competitiveness cost optimization. The respondents were asked to rank the practices in the scale of 1-5 and the findings are as in Table 4.3.7 below

Table 4.3.7 Kaizen

	N	Minimum		Mean	Std. Deviation
To Make Their Processes Better	63	3.00	5.00	3.9206	.51749
Achieved Improvement	63	3.00	5.00	4.0159	.42091
Modify Process To Achieve Expected Results	63	3.00	5.00	4.2857	.63318
Analyze Of Entire Process To Identify Flaws	63	2.00	5.00	4.2540	.98322
Encourages Teamwork	63	3.00	5.00	3.9206	.51749
Develop Of Staff Through Workshops	63	2.00	5.00	3.7302	.97064
Valid N (listwise)	63				

Source; research data 2013

The parameters which ranked highest were both the analysis and flaw identification and process modification to achieve quality and optimize on costs. These parameters had scores of 4.25 and 4.29 respectively. The parameter that scored least under these group of variable was the holding of workshops (μ=3.73 ,s=0.98).the high variance of 0.98 was an indication that the companies sampled differed significantly in their approach to the use of workshops as a cost optimization tool. While some of the companies can be said to be of the view that workers if empowered through workshops, they can be change agents for cost optimization, some companies would be said to be of the view that this was money wasting. Other parameters that were found to be practiced were team building and the encouragement of team work which was ranked (μ=3.92, s=0.52). The standard deviation in this parameter was relatively low meaning that team building was a favoured approach to cost optimization. This supports Imai(1985) whose findings concluded that an organization cannot remain competitive if it does not work towards improvements since the business environment changes.

4.3.8 Innovation

Business innovation processes involves the use of technology and change in design of processes in manner that optimizes on the firm's resources. The respondents were asked to indicate to what extent their company implemented the innovative practices and the findings were as in the table below.

Table 4.3.8 Innovation

	N	Minimum	Maximum	Mean	Std. Deviation
Integrates Various Technology In Service Delivery	63	3.00	5.00	3.6984	.61263
Closer Collaboration Across Supply Chain	63	3.00	4.00	3.8095	.39583
Encourages Close Collaboration With Competitors	63	3.00	5.00	3.7143	.63318
Encourages Introduction Of New Products	63	3.00	4.00	3.7143	.45538
Fast To Adapt New Technology Service Delivery	63	4.00	5.00	4.0794	.27248
Continuously Renew Focus On Product And Service	63	2.00	5.00	3.5714	.85599
Valid N (listwise)	63				

Source; research data 2013

The research revealed that to a large extent the companies were quick to adopt new technology as a cost optimization technology. The parameter had the highest rank at (4.01,s=0.27). The standard deviation was relatively low compared to the rest meaning that this was a most desired approach to cost optimization amongst the companies surveyed.

The researcher sought to know if the companies had close collaboration with competitors as a way of cost optimization. The mean rank for the parameter was found to be 3.7 1, with a standard deviation of 0.63. This agrees with some of the practices in the private security industry where some services that are not offered by one company can be provided by competitors. Some companies were for instance known to outsource alarm

back up services from other security companies. This finding supports Fisher, (2012) whose findings concluded that there is a notable development in the emergence of transformational innovation based on a closer collaboration across the supply chain.

4.3.9 Quality management

Values such Customer focus, leadership, Involvement of People, Process approach, System approach to Management, Continuous improvement, factual approach to Decision making and Mutually Beneficial Supplier Relationships are key issues in quality management. The researcher wanted to know the extent to which various quality management practices were applied as a cost optimization strategy. The respondents were asked to indicate the extent to which the quality management practices are put in place in their company and the findings are as in the table below.

	N	Minimum	Maximum	Mean	Std. Deviation
quality conscious culture in the work force	63	3.00	5.00	4.2857	.63318
uses ISO to monitor service quality	63	4.00	5.00	4.2540	.43878
seeks to exceed customer expectations	63	4.00	5.00	4.1905	.39583
consistent in keeping standards to clients	63	3.00	5.00	4.0159	.42091
makes use of TQM management practices	63	3.00	5.00	3.9841	.60886
strong focus on customer service	63	3.00	5.00	3.9048	.53019
use process approach to quality management	63	2.00	5.00	3.7937	.72198
Valid N (listwise)	63				

Source; research data 2013

The scale used was; (5 to a very large extent and 1 for very little extent). The variables had a mean rank of between 3.79 for the use of process approach and the highest was 4.28 for creating a quality conscious culture in the work force. ISO certification, exceeding customer expectations and keeping quality standards in a consistent manner had overall scores of 4.25, 4.19, and 4.02 respectively. The overall high scores is an indication of commitment of private security companies to achieving cost optimization. This supports whose findings concluded that cost optimization can be achieved through quality management practices such as exceeding customer expectations, involvement of people, and continuous improvement among others.

4.3.10 Six sigma

Six sigma cost optimization philosophy is based on elimination of defects. Therefore Six- sigma is a strategy that seeks to increase efficiency through increased efficiency in the processes that produce the results. The respondents were asked to indicate the extent their company employs six sigma practices and the findings are as in the table below.

parameter	N	Minimum	Maximum	Mean	Std. Deviation
Promotion Of Staff From Within	63	3.00	5.00	4.1905	.59180
Clear Organizational Structure	63	3.00	5.00	4.0159	.60886
Invests In Training And Staff Motivation	63	2.00	5.00	3.8889	.80545
Provides Befits And Compensation To Staff	63	3.00	5.00	3.8254	.73044
Relies On Disciplined Use Of Data Fact For Decision Making	63	3.00	5.00	3.7254	.58309
Consistently Provide Flawless Services	63	3.00	4.00	3.4143	.45538
Valid N (listwise)	63				

Source; research data 2013

The researcher sought to find out the extent to which six-sigma was applied as a strategy for cost optimization. These findings support Lee (2002) whose findings concluded that root cause analysis statistical process control aim to eliminate defects as a way of maximizing business success.

4.3.11 Other practices used for cost optimization

The researcher was interested to know the extent to which the security companies embraced other cost optimization practices. Some of these practices included procurement, improving productivity, outsourcing, supply chain cost reduction, worker empowerment, strategic sourcing, waste reduction, cost leadership and total cost reduction ownership. The respondents were asked to indicate the extent to which their company utilize other factors for cost optimization and the results are as below.

Table 4.3.11 Other Practices

	N	Minimum	Maximum	Mean	Std. Deviation
Improving On Productivity	63	3.00	5.00	4.1111	.67468
Strategic Sourcing And Procurement	63	3.00	5.00	4.0952	.53019
Supply Chain Cost Reduction	63	3.00	5.00	4.0317	.59482
Worker Empowerment And Waste Reduction	63	3.00	5.00	3.9206	.51749
Cost Leadership	63	2.00	5.00	3.7619	.96243
Total Cost Ownership	63	2.00	5.00	3.6667	1.07763
Valid N (listwise)	63				

Source; research data 2013

The findings revealed that the companies had embraced a number of other cost optimization practices. The ranking was on a scale of 1 to 5. The highest ranking of 5 was

to a great extent while 1 was s to least extent. The findings revealed that improving on product productivity was the most significant approach that was for cost optimization with a mean of (μ= 4.11, s=0.67). Supply chain cost reduction and procurement

Cost leadership and total cost ownership had means of 3.76 and 3.67 respectively. The two mentioned parameters mentioned had the least rank in terms of adoption. The parameters that had the highest ranking were productivity improvement, strategic sourcing and supply chain cost reduction. These parameters had rankings of (4.11, s= 0.67) and (μ=4.095,s=0.53) respectively. The researcher was also interested to know the extent to which the security companies embraced other cost optimization practices. The findings revealed that the companies had embraced a number of other cost optimization practices. The ranking was on a scale of 1 to 5. The highest ranking of 5 was to a great extent while 1 was s to least extent. The findings revealed that improving on product productivity was the most significant approach as for cost optimization with a mean of (μ= 4.11, s=0.67). Supply chain cost reduction and procurement 4.03. This supports Croby (1984), Edward (1950), Eckes (2001) whose findings concluded that factors such as waste reduction, strategic sourcing, worker empowerment, waste reduction are also utilized for cost optimizations.

4.4.1 Overall ranking of cost optimization practices

The sought to find out the overall ranking and the extent to which each of the parameters were used as cost optimization strategies. The mean from the variables under the various constructs was computed and used to establish their weighting. Table 4.4.1 shows the summary of the findings to enable the researcher arrive at a more informed opinion from the findings. The scale used was (5= very large extent, 4= large extent, 3=moderate 2

little extent, 1= very little extent)

parameter of cost optimization	mean score	scale
Bench marking	3.9	large extent
JIT	3.65	large extent
kaizen	3.71	large extent
innovation	3.76	large extent
quality management	4.06	large extent
six sigma	3.82	large extent
other practices	3.93	large extent

From the research study, it was evident that quality management had the highest scale rating. The researcher therefore concluded that quality management was the most important strategy to cost optimization with a mean ranking of 4.06. JIT as a strategy had the least ranking at 3.65. It can be argued that that the use of JIT has not gained popularity because it is relatively a new concept amongst private security companies in Kenya. The supply chain vulnerability in the developing countries may also explain that reason why companies may not heavily rely on JIT as this may occasion unplanned stock outs due to supply chain vulnerability.

Regression analysis was performed on the parameters used to measure cost optimization to establish the relationship between competitiveness and cost optimization practices**.** A model summary revealed that the contribution of the variables selected for the study accounted for more 78% of the strategies used by private security firms for cost optimization.

Table 4.4.2 Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.883[a]	.780	.738	.95575

a. Predictors: (Constant), strategic sourcing and procurement, makes use of TQM management practices, product and service for each market segment, encourages teamwork, develop of staff through workshops, total cost ownership, cost leadership, continuously measures products and services, learn to improve competitiveness, uses ISO to monitor service quality

The model summary reveals that the key predictors of cost optimization are strategic sourcing and procurement, total quality management (TQM, team work, total cost ownership, ISO, and the development of products that are suited for each market. Adjusted R square (73.8%) shows that the contribution of the parameters in the model show that cost optimization strategies identified are central to achieving significant competitiveness for the security companies.

The standardized coefficients from the linear regression model were used to predict the relationship between the various variables under the under the selected cost optimization practices. The regression model obtained was summarized using the table of standardized coefficients in 4.4.3.

Table 4.4.3 Table of standardized coefficients

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	10.066	3.519		2.860	.006
	Learning to improve competitiveness	-1.324	.456	-.344	-2.904	.005
	Continuously measures products and services	1.011	.480	.214	2.108	.040
	Encourages teamwork	.372	.274	.103	1.360	.180
	Develop of staff through workshops	-.736	.219	-.383	-3.367	.001
	Product and service for each market segment	.560	.223	.290	2.508	.015
	Makes use of TQM management practices	.680	.250	.222	2.716	.009
	Uses ISO to monitor service quality	-.306	.598	-.072	-.511	.611
	Cost leadership	-.938	.184	-.484	-5.097	.000
	Total cost ownership	1.232	.177	.711	6.943	.000
	Strategic sourcing and procurement	-2.088	.479	-.593	-4.360	.000
a. Dependent Variable: department						

The coefficients were all significant except the use of ISO which had P>0.05.

Competitiveness=

10.6+B1X+B2X2+B3X3+B4x4+B5X5+B6X6+B7X7+B8X8+BX9+B10X10+ error term

Where B1= -1.324, B2= 1.011, B3= 0.372, B4= -0.736, B5= 0.560, B6= 0 .680, B7= -0.306, B8= -0.938, B9=1.232, B10= -2.088.

So Competitiveness = $10.6-1.324X_1+1.011X_2+0.372X_3-0.736x_4+0.56X_5+0.68X_6-0.306X_7-0.938X_8+1.232X_9-2.088X_{10}+ e$

Variables of X

X_1.	Learning To Improve Competitiveness through Studying Practices of Other Competitors
X_2.	Continuously Measures Products and Services
X_3.	Encourages Teamwork
X_4.	Develop Of Staff through Workshops
X_5.	Product and Service for each Market Segment
X_6.	Makes Use of TQM Management Practices
X_7.	Use of ISO to Monitor Service Quality
X_8.	Cost Leadership Practice
X_9	Total Cost Ownership
X_{10}	Strategic Sourcing and Procurement

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of findings.

The purpose of this research study was to establish the relationship between cost optimization practices and competitiveness among security firms in operating in Nairobi County. A census survey design approach was used for this study. The researcher targeted 116 respondents who were departmental heads at the time of the study.

The response rate for the study was found to be 63(54.3%) which the researcher considered adequate for analysis and reporting.

5.2 conclusions

The study established that private security companies use different cost optimization practices to enhance competitiveness. Quality management was the main practice that was the most preferred practice used by security companies. .It was also revealed that most security companies used JIT as a cost optimization strategy to a moderate extent. What was evident was also that work empowerment as a cost optimization approach was yet gain an appreciable degree of acceptance. It would therefore be recommended that private security companies consider incorporating these practices as cost optimization to further their operational competitiveness. The model proposed for provides a useful guide to players in the industry as it outlines parameters that ignored and those that are commonly practiced. This can enrich cost optimization practice for improved competitiveness.

5.3 Recommendations

The private security companies need to evaluate the cost strategies that they use with the view of optimizing on cost savings to remain competitive. Cost optimizations practices

should if necessary include making investments in processes and technology that will in the long run yield savings and therefore enhance competitiveness.

Private security companies should consider how workers can be empowered through workshops and seminars to be effective change agents in the implementation of cost optimization practices. Various cost were found to have a positive effect in enhancing competitiveness and therefore it is recommended that to derive maximum benefits , security companies can incorporate a variety of cost optimization approaches.

The study was limited to the extent that it was a census survey which covered a small proportion of operators in the private security industry. the criteria chosen was being members of KISA , left a big section of private security operators who are not members whose challenges may be different.

5.4. Suggestions for further research.

The research study can be further enriched by conducting further research in the following areas.

The relationship between cost optimization, total quality management and competitiveness in private security firms, the relationship between Cost optimization, strategic procurement, outsourcing and competitiveness in private security industry, Cost optimization, customer satisfaction and competitiveness in the private security industry and the impact of kaizen on cost optimization and the competitiveness of private security firms in Kenya.

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Appendix 1: Members of Kenya Security Industry Association (KISA)

1) Wells Fargo Limited
2) Sunrays Solar Ltd
3) Collindale Security
4) Bob Morgan Services Limited
5) Ultimate Security Ltd
6) G4S Security Services Kenya Limited
7) Instarect
8) KK Security
9) Magnum Allied Systems Ltd
10) Pinkerton's
11) Riley Services Limited
12) Securex Agencies Kenya Ltd
13) Security Group Of Companies Ltd
14) Watchdog Alert
15) Total Security
16) Radar Security Limited
17) Fidelity Security Services
18) Corporate Security
19) Cobra Security
20) Delight Security Services Ltd

21) Brinks Security Services

22) Cybertrace

23) Texas Alarms

24) Northwood Services

25) Nine One One group limited

26) Absolute Security Ltd

27) Infama Ltd

28) Bedrock Security Services Ltd

29) 911 Security Services

Appendix II - Questionnaire

Section A. General Information

Please tick appropriately

1. Gender
   a. Male { } b. Female { }

2. Kindly indicate your age group
   a) 21-30 { } b) 31-40 { } c) 41-50 { }
   d) 51-60 { } e) Over 60 { }

3. Kindly indicate your education level
   a. Primary , KCPE,CPE { } b) Secondary { }
   b) College { } d) University { }
   e) Masters, post graduate { } f) others (Specify……

4. Please indicate the average number of employees in your firm.
   a) Less 1000 { } b) 1001 - 2000 { }
   c) 2001 - 3000 { } d) 3001 - 4000 { }
   e) 4000 and more { }

5. Kindly indicate the nature of ownership of your company
   a. Fully locally owned { }
   b. Fully foreign owned { }
   c. Local and foreign { }

6. Please tick the number of years you have been a HOD with this company.
a) Less one yr { } b) 6-10 { } c) above 11 { }

7. Please indicate if your company is ISO certified.
a. {Yes} b. {No}

8. Please tick your department from the list below.
a) HR & Dev'nt { } b) Marketing { }
c) Procurement { } d) Training { }
e) Accounting { } f) Operations { }

9. To what extent has your security firm involved the security activities below? Use a scale of 1 – 5, where 5 =Very large extent, 4= Large extent, 3= Moderate extent, 2=little extent, 1= Very little extent.

parameter	5	4	3	2	1
Guarding services					
Investigation services					
Alarm response					
Close protection					
Cash in transit					

Fire					
Dog services					
Escort services					
Events Management					
Courier services					
Facility management					
Training					
consultancy					
Ambulance					

Section B: Cost Optimization Practices

10. Do you have a strategy that seeks to minimize costs while enhancing the firm's margin?

a) Yes { } b) No { }

11. Has the strategy eliminated non essential activities in your operations?

a) Yes { } b) No { }

12. To what extent has your security firm implemented the bench marking practice in an effort to eliminate waste? Use the scale 1-5 where, 5 =Very Great extent, 4= Great extent, 3= Moderate, 2=Small extent, 1= Very Small extent.

	5	4	3	2	1
The firm learns from competitors to improve operational capability					
The firm learns from competitors to improve operational competitiveness					
The firm has adopted best practices from best of class firms in security services					
The firm continuously measures its products and services against competitors					
The firm continuously and systematically evaluate business processes					
The firm seek to improve on cost optimization					

13. To what extent has your security firm implemented the following JIT practices in an effort to eliminate waste? Use the scale 1-5 where, 5 =Very Great extent, 4= Great extent, 3= Moderate, 2=Small extent, 1= Very Small extent

	5	4	3	2	1
The firm has embarked on a search for ways to make processes more efficient					
The firm facilitates timeliness In supply and distribution					
The firm activities are scheduled to minimize idle time					
The firm periodically trains staff to enhance their efficiency					
The firms inventory supply is delivered just when needed for use					
The firm continuously involve all departments in improving quality of services and products					

14. To what extent has your security firm implemented the following Kaizen practices in an effort improve on processes? Use the scale 1-5 where, 5 =Very Great extent, 4= Great

extent, 3= Moderate, 2=Small extent, 1= Very Small extent

	5	4	3	2	1
The firms always seeks for ways to make their processes better					
The firm seeks to better achieved improvement					
The firm seeks to modify processes in achieving expected results.					
The firm always seeks to analyze the entire process to identify flaws responsible for waste					
The firm encourages team work					
The firm develops staff through workshops and encourages personal career growth and development					

15. To what extent has your security firm implemented the following innovation practices in an effort to achieve competitiveness? Use the scale 1-5 where, 5 =Very Great extent, 4= Great extent, 3= Moderate, 2=Small extent, 1= Very Small extent

	5	4	3	2	1
The firms integrates various technologies in service delivery					
The firm uses closer collaboration across the supply chain					
The firm encourages close collaboration with competitors					
The firm top management encourages introduction of new product lines in the market place from time to time					
The firm is fast to adapt new technologies service delivery					
The firm continuously renew its focus on products & services					

16. To what extent has your security firm implemented the following quality management practices in an effort to remain competitive? Use the scale 1-5 where, 5 =Very Great extent, 4= Great extent, 3= Moderate, 2=Small extent, 1= Very Small extent

	5	4	3	2	1
The firm provides seeks to exceed customer expectations					
The firm has a quality conscious culture in the work force					
The firm is consistent in keeping expected standards to clients					
The firm has a strong focus on customer service when addressing needs of other stake holders					
The firm use processes approach to quality management					
The firm makes use of TQM management practices					
The firm uses ISO to monitor service quality					

17. To what extent has your security firm implemented the following six sigma quality management practices in an effort to remain competitive? Use the scale 1-5 where, 5 =Very Great extent, 4= Great extent, 3= Moderate, 2=Small extent, 1= Very Small extent

	5	4	3	2	1
The firm consistently provides a flawless service (avoid defects)					
The firm when relies on disciplined use of data, facts for decision making.					
The firm invests in training and staff motivation					
The company encourages promotion of staff from within					
The company provides benefits and compensation to staff as a way of retaining them					
The firm has a clear organizational structure aligned to financial goals					

18. To what extent has your security firm implemented the following other cost optimization practices in an effort to remain competitive? Use the scale 1-5 where, 5 =Very Great extent, 4= Great extent, 3= Moderate, 2=Small extent, 1= Very Small extent

	5	4	3	2	1
Cost leadership					
Supply chain cost reduction					
Worker empowerment and waste reduction					
Total cost ownership					
Waste reduction as a means of improving on productivity					
Strategic sourcing and procurement					