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**PROACTIVENESS OF THE OPERATIONS MANAGEMENT
FUNCTION: THE CASE OF KENYA POWER AND LIGHTING
COMPANY //**

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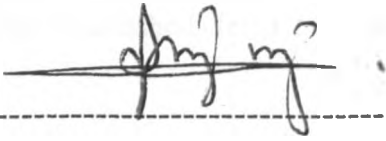
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**A RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF
MASTER OF BUSINESS ADMINISTRATION (MBA) DEGREE OF THE
UNIVERSITY OF NAIROBI**

2004

DECLARATION

This research project is my original work and has not been submitted for a degree to any other University.



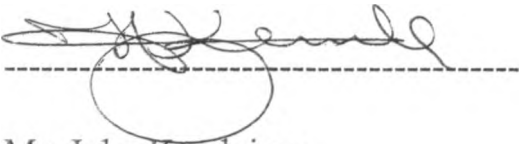
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This research project has been submitted for examination with my approval as a University Supervisor.



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DEDICATION

This report is dedicated to Buyanzi and Bugasu. Above all, I dedicate all my work to my lord and saviour Jesus Christ in whom all things consist (John 1:3-4): Him who has power over our eternal destiny, and whose purposes and plans for our lives have long been established (Jer. 1:5; 29:11).

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ABSTRACT

The basic goal of this study was an attempt to explore the application of the theory of operations strategy to a typical utility services company. Operations strategy has for long been recognised as an important factor in competitiveness. As early as 1969, scholars such as W. Skinner identified this as being a critical link in organisational success. As recently as 2003, a 10-year longitudinal research conducted by Nohria et al (2003) on more than 200 firms revealed that focus on operations contributed greatly to competitiveness. Overall, the operations function is now recognised as an important core function, and Companies continue to use operations strategy in seeking competitive edge over their rivals.

This study focused on the operations function at Kenya Power and Lighting Company (KPLC). The research sample of 105 management staff was drawn from the transmission and distribution divisions at KPLC. Data collection was done through a Questionnaire consisting of structured closed-ended questions addressing the objectives of the research. 80% response rate was realised.

The research largely achieved its objectives. It was noted that on the overall, the contribution by the operations management (OM) function was considered significant on most aspects of strategy development at KPLC. However, findings reveal that the role of the OM function in aspects of strategy development such as identification of customer requirements and performance priorities is markedly lower than the role played by the OM function in strategy implementation. On investigating the status of the performance priorities which are necessary for success, top management support for these priorities is generally considered high, while coordination between various

functions, for the purpose of operational success, is considered relatively wanting. In relative terms, respondents did not rate the current approaches to operational improvement highly. Generally, responses indicate that KPLC's corporate objectives are clear, but there seems to be some missing links between the intended performance priorities, and what is actually realised.

The study also sought to investigate the challenges faced at KPLC in the integration of the performance priorities of the operations management (OM) function into the competitive strategy based on what Miller et al (1981) called the 'three important system components' of people, information and equipment. Also investigated were challenges faced in strategy deployment. The findings were that some important aspects of strategy deployment such as organisation structure are considered a major challenge, the same for appropriate training and upgrading of skills of operational staff and to an extent, performance measurement and monitoring approaches. Also, there are several 'people' issues on which a high percentage of respondents strongly agreed presented challenges, the same was observed for issues to do with equipment and physical infrastructure. Relatively, the challenges faced have less to do with information technology and communication channels.

The findings of this study are likely to prove to be quite interesting to KPLC's management, especially at a time when it is focusing on operational improvement, not only from the micro-economic point of view but also from the macro-economic perspective.

1: INTRODUCTION

1.1 BACKGROUND

"The amount of organisational change occurring today is unprecedented and is resulting in less organisational stability and redefinition of organisational activity" (Henderson and McAdam, 2001). Henderson and McAdam (2001) conducted a case study on Northern Ireland Electricity PLC, focusing on the impact of business environmental changes on decision processes in a fragmented firm. The researchers suggest that there have been changes in utility companies in the recent past, impacting on their structure and infrastructure, and that these changes have affected how electricity is procured, how it is transmitted, and how it is distributed to the consumers.

In Kenya today, the possibility of sectoral liberalisation and privatisation can be considered as an important challenge facing utility companies. Currently, Kenya Power and Lighting Company (KPLC) is a statutory monopoly in the electricity transmission and distribution sector in Kenya. However, there are clear pointers to the possibility of liberalisation of this sector, as is evident from numerous statements from the authorities concerned. For example, there have recently been several credible press reports attributable to the Kenyan energy minister, to the effect that plans to privatize KPLC and liberalize the electricity transmission and distribution market are at an advanced stage.

Liberalisation and privatisation of the Kenyan energy sector will most likely result in KPLC having to contend with world-class competition. It may be noted that the

realisation of this possibility of 'trouble ahead' is a major driver behind the change efforts observed at KPLC in the recent past (Thiga, 1999). These 'change' efforts, since 1994, have been geared towards preparing KPLC to be competitive in a competitive environment (KPLC, 1998). Such preparation has also included improvement initiatives targeting its operations and business processes (Thiga, 1999). Russell and TaylorIII (1999) argue that for a firm to achieve good results in its quest for competitiveness, the corporate vision and strategic plan needs to be converted into a series of consistent achievable action plans to be deployed throughout the Organisation.

The changes occurring in utility companies can be mainly attributed to globalisation. One of the effects of globalisation has been an increase in consumer awareness leading to more stringent customer requirements. Companies are therefore constantly seeking to position themselves to be more competitive than their rivals (Porter, 1998; Porter, 1999). It is increasingly clear that to achieve sustainable competitiveness, especially at the world class level, companies must not only adopt a clear corporate strategy, but they also require a business strategy (competitive strategy). Corporate strategy defines which business or industry or product line the company will be involved in (Porter, 1998), while business strategy (competitive strategy) is more specific and defines how a firm intends to compete in the particular industry or product line (Pearce and Robinson, 2000; Porter, 1999).

Many authorities including Porter (1999), Pearce and Robinson (2003) recognise the role played by functional strategies towards the achievement of competitiveness. Operations

strategy is a functional strategy, like marketing strategy, finance strategy, e.t.c. Operations strategy has been defined as the effective utilization of resources and capabilities towards the achievement of company goals and objectives (Kim and Lee, 1993). The definition of operations strategy given by Lawson (2001) appears to relate more closely to the supply chain and it may apply to utility companies like KPLC. Lawson (2001) defines operations strategy as "major decisions about, and strategic management of core competencies, capabilities, processes, technologies, resources, and key tactical activities necessary in any supply network, in order to create and deliver products or services and the value demanded by a customer". Operations strategy can therefore be seen to define how a firm will effectively identify, develop, deploy, support and protect the necessary organisational resources and capabilities so as to ensure realisation of company's goals through creation of the product or customer value (Gagnon, 1999; Krajewski and Ritzman, 1999; Kim and Lee, 1993; Lawson, 2001).

Some recent research findings have suggested that operations strategy is very critical to the achievement of competitiveness in today's environment. The findings of Nohria, et al (2003) are particularly interesting. The researchers conducted a 10-year longitudinal study on over 200 companies, after which they concluded that: 'focus on operations, coupled with excellent execution of strategy enables companies to outperform their peers'. Further, Nohria, et al (2003) postulate that for competitiveness, a company must 'maintain a disciplined attention to operations since that is what really counts'.

Different companies treat the Operations Management (OM) function differently. The

views of Hayes and Wheelwright (1984), as well as the findings of Nohria et al (2003), among others, suggest that the OM function is critical for competitiveness. Hayes and Wheelwright (1984) go further to provide a framework by which the status of OM function in any given organisation can be assessed. Using the same framework, the status of the OM function can be placed in either of the following four stages, namely:- internally neutral, externally neutral, internally supportive, and externally supportive. The Hayes-Wheelwright framework has been discussed further in the chapter on literature review.

Many authorities appear to agree that there is need for the OM function to effectively contribute to the overall competitive strategy of the firm, and that there is need for an operations strategy (Skinner, 1985; Gagnon, 1999; Krajewski, 1999; Wild, 2002; e.t.c.). The operations strategy has to be correctly aligned vertically and horizontally (Russell and TaylorIII, 1999; Mclaughlin, 1991). How the strategy is implemented to excel in the intended competitive priorities is very important (Boyer, 1998).

KPLC may seem to be agreed on its corporate goals, and their competitive strategy appears to focus on becoming competitive by aiming to provide services at the 'world class' level (KPLC, 1998; Thiga, 1999). However, there is need to identify what role the OM function needs to play and the necessary capabilities that have to be developed in this particular function of the organisation (Dilworth, 1992).

1.2 STATEMENT OF THE PROBLEM

For an Organisation that seeks to be competitive in today's environment, the Operations Management (OM) function must go beyond routine execution of its defined activities: it has to be proactive. Proactiveness of the OM function implies that there has to be an operations strategy that is well developed and implemented. Such an operations strategy has to fit vertically with the overall competitive strategy and horizontally with other functional strategies.

When world class competitiveness is sought, it is increasingly clear that the OM function has to play a key role in competitive strategy development and implementation (McCracken, 1993; Skinner, Hayes and Wheelwright, 1984; Skinner, 1985). The OM function has to move beyond the basics and become responsive, agile and lean (Lowe and Makham, 2001). Managers need to look at OM function as a source of competitive advantage, hence allow this function to contribute effectively to competitive strategy (Hayes and Wheelwright, 1984).

In the view expoused by Aosa (1992), execution of strategy involves the development of organisational core capabilities. Core capabilities can be developed and deployed through an operations strategy that effectively supports the competitive strategy (Lowson, 2001; Gagnon, 1999; Rusell and TaylorIII, 1999; Krajewski and Ritzman, 1999; e.t.c.). Operations strategy is about the development and utilization of core capabilities in order to achieve corporate goals (Kim and Lee, 1993).

The OM function at KPLC may be facing a major challenge as the company pursues its vision. This view is based on one of the findings of an internally initiated survey conducted recently by KPLC on electricity consumers. One of the findings of KPLC (2002), was that 'the level of dissatisfaction with KPLC services was so dramatic and will require immediate and long term action by KPLC over a wide range of activities'. A close examination of issues raised by KPLC's customers (KPLC, 2002) may appear to suggest that there is a direct link to the overall operations management function at KPLC. An analysis report appearing in the Financial Standard Newspaper of 27th April 2004 suggests that KPLC is still far from meeting its customers' expectations in terms of reliability and quality of electricity supply. This same report concludes that: 'at the operational level KPLC seems to be going from better to worse'.

All the above statements are made against the background of change efforts that have been going on at KPLC since 1994 (Thiga, 1999). Yet, KPLC's vision statement is 'to attain world class status as a quality service business enterprise so as to be the first choice supplier of electricity in a competitive environment' (KPLC, 1998).

It is apparent that if KPLC has to achieve its vision, there is need for the OM function to contribute effectively to the competitive strategy. Further, the operations strategy has to be integrated into the overall competitive strategy of the firm in order for the OM function to effectively play its role in strategy execution. The question therefore is: to what extent does the OM function at KPLC contribute to the competitive strategy?

Further, what are the challenges experienced at KPLC in integrating operations strategy into the overall competitive strategy?

1.3 RESEARCH OBJECTIVES

The objectives of this research will therefore be:-

- i. to establish the extent to which the operations management function contributes to the competitive strategy at the Kenya Power and Lighting Company Limited;
- ii. to investigate the challenges experienced in integrating operations strategy into the overall competitive strategy at KPLC.

1.4 IMPORTANCE OF THE RESEARCH

- i. The findings of this study will contribute to operations management literature by providing some empirical findings on the role of OM function in strategy development and implementation.
- ii. The findings from an investigation into the challenges experienced, at KPLC, in integrating operations strategy into competitive strategy will provide a basis for further research into the area of operations strategy development and implementation in utility companies.
- iii. By providing an analysis of how the Operations Management (OM) function contributes to competitive strategy at KPLC, this study will present invaluable information to KPLC Managers. Such information will assist the Company in making the OM function more effective in playing its role towards the

achievement of the goal of competitiveness in the anticipated competitive environment.

- iv. By documenting the challenges experienced in integrating operations strategy into competitive strategy, this study will provide KPLC Managers with invaluable information that will assist the company to surmount the challenges faced along the path towards 'world class' competitiveness.

2: LITERATURE REVIEW

2.1 STRATEGY

There are various definitions of strategy, and these include the one given by Aosa (1992). Aosa (1992) defines strategy as the 'solving of a strategic problem, which is a mismatch between internal characteristics of the Organisation and its external environment through the development of organisational core capabilities that are correctly related with the external environment to exploit opportunities'. Daft (2001) has a similar view of strategy as he defines strategy as a plan for interacting with the competitive environment to achieve organisational goals. Mintzberg and Quin (1996) define strategy as a pattern or plan that integrates an organisation's major goals, policies, and action sequences into a cohesive whole. Pearce and Robinson (2000) note that there are three levels of strategy, namely: corporate level strategy, business level strategy (or competitive strategy), and functional level strategies such as operations strategy.

Corporate strategy defines which business, industry or product line a firm will engage in, while competitive strategy (business strategy) defines how the firm will compete in the particular industry or product line. For example Porter (1998), suggests that competitive edge can be achieved through either: (1) cost leadership (2) product differentiation or (3) focus (market segmentation).

It can therefore be argued that strategy provides direction (Skinner, 1969), and an appropriate strategy that is well executed will lead to competitiveness (Boyer, 1998). Daft

appropriate strategy that is well executed will lead to competitiveness (Boyer, 1998). Daft (2001) argues that a well formulated strategy helps to marshal and allocate an organisation's resources. A well-formulated strategy that is well executed is therefore critical in the achievement of the goal of competitiveness.

2.2 COMPETITIVE STRATEGY

2.2.1 Definition of Competitive Strategy

Competitive strategy consists of business approaches and initiatives a firm undertakes to attract more customers and fulfill their expectations, to withstand competitive pressures and to strengthen its market position (Thompson and Strickland, 2003). For the intended competitive strategy to be realised, the contribution and support of all functions, including OM function, is important.

2.2.2 The Resource-based view of Strategy

The essence of the resource-based view is its focus on the individual resources, competencies and capabilities of the organization (Lawson, 2002). Wild (2002) on the other hand defines what he calls an operating system within an Organisation as 'a configuration of resources combined for the provision of goods and services'. Porter (1998) perceives the firm as 'a collection of activities; a set of resources and capabilities'. Noting that customer value is created through the value chain, Porter (1998) argues that which 'resources and capabilities' are required, is determined by the 'value adding activities'.

Gagnon (1999), in supporting the resource-based view of strategy, suggests that organisations can achieve better results by focusing on developing, leveraging and protecting a firm's unique operational resources and capabilities. This is a different view from the market-based view. The market-based view of strategy sees operations as a perfectly adjustable system, which successfully follows rules dictated by the Market (Gagnon, 1999). Gagnon (1999) goes further to suggest that strategic management discipline has moved recently from a "market-based" to a "resource-based" view of strategy, and that the resource-based view has been gaining prominence.

Johnson and Scholes (1999), highlight the importance of resources and capabilities in an Organisation's strategic positioning as they note that 'resources and competencies of an Organisation make up its strategic capability'. Findings from a number of studies have linked organisational capabilities and competitiveness: For example, Prahalad and Hamel (1990) emphasize the link between core competencies and competitiveness.

Pearce and Robinson (2003) seek to clarify that organisational capabilities are not merely tangible and intangible assets: 'capabilities should be seen as skills – the ability and ways of combining assets, people, processes – that a company uses to transform its inputs into outputs'. Gagnon (1999) argues that there is need to address the issue of how competencies and resources can be developed, deployed and protected. Lawson (2002) classifies organisational resources as follows:- tangible (physical, technologies and financial, etc.), intangible (communication and information systems, reputation, culture, brands, etc.); and human (specialised skills and knowledge, communication and

interaction, motivation, etc.).

The success of an operations strategy depends on how an Organisation's resources are combined to create value for the customer: 'when resources are combined, they can lead to the formation of competencies and capabilities', (Prahalad and Hamel, 1990). Lawson (2002) explains the link between competencies and capabilities thus: competencies refer to the fundamental knowledge owned by the firm (knowledge, know-how, experience, innovation, and unique information); on the other hand capabilities reflect an Organisation's ability to use its competencies. Lawson (2002) goes further to explain that capabilities refer to the dynamic routines acquired by the firm, and that competitive advantage will be achieved through a focus on key competencies (those things in which the firm specializes or does well).

After conducting a survey on American firms, Lowe and Makham (2001) came up with the following findings on perspectives that lead to operational improvement: (1) operations management has to move beyond the basics and becomes responsive, agile and lean; (2) formal programmes that are designed to generate sustained improvement will play an important role; (3) the level of knowledge as a resource, and its flow in the Organisation is key to performance improvement.

2.2.3 Strategic Resources

Lawson (2002) argues that whatever strategies are adopted by an Organisation, there are 'building blocks' that are used to assemble these strategies. Lawson (2002) suggests that

these building blocks include core competencies, capabilities and processes. Further, Lawson (2002) identifies the following forms of organisational core competencies or capabilities: process-based (derived from transformation activities), system or coordination-based, (across the entire operational system), organization-based (across the entire organization) and network-based (covering the whole supply network).

Lawson (2002) also identifies the following resources, noting that organisational resources depend on the industry and the firm: (1) individual resources of the firm (capital equipment, skills, brands and so on); and (2) the way they work together to create competitive advantage.

2.3 COMPETITIVE STRATEGY AND THE OM FUNCTION

2.3.1 Role of the OM function in strategy execution

Operations Management (OM) function, when viewed as a process by which customer value is created from inputs, has been regarded by many authorities as a core function within the Organisation (Chase et al, 1999; Porter, 1985). Schonbeger and Knod (1997) acknowledge the importance of the OM function in any business enterprise when they identify it as one of the 'basic management responsibilities'. Skinner (1985), Hayes and Wheelwright (1984), as well as Schonberger (1986) recognise the role played by manufacturing (or operations management) towards the achievement of competitive advantage. Hayes and Wheelwright (1984) go further to provide a framework by which the role of OM function in any given firm can be assessed. Further discussion of the Hayes-wheelwright framework has been provided below.

2.3.2 Vertical Linkages

Strategy adopted by the Operations Management (OM) function must be consistent with business strategy of the firm (Russell and TaylorIII, 1999). Boyer (1998) emphasizes that key decisions made at the business strategy level must fit with the competitive priorities identified for the OM function. Boyer (1998) goes further to state that: 'the degree of fit between an Organisation's competitive priorities and its a key decisions regarding structural and infrastructural investments provide the key to developing the full potential of operations as a competitive weapon'. Mclaughlin et al (1991) emphasize the position that OM decisions should not be discreet, independent events, but must support the business strategy of the firm.

2.3.3 Horizontal Linkages

In addition to the alignment of operations strategy to the competitive strategy, there is need for a fit between the various functional strategies. Effective coordination between the various functions is also very important for the realisation of success (Mclaughlin et al, 1991). Mclaughlin et al (1991) go on to suggest that the foregoing is found to be very important in the service industry where 'there is often no buffer between the production process and the delivery of the product to the customer': 'the product is consumed as it is produced'.

Dilworth (1992) notes the implications of the difference between service industry and manufacturing in that in the service industry, the marketing and customer relations

aspects often overlap the operations function. McLaughlin et al (1991) argue that while in a manufacturing firm different functions can work independently and only be coordinated to support the competitive strategy, this will not be sufficient for the service operations. In the service industry all functions must work very closely in the process of service delivery. McLaughlin, et al (1991) found out that, in the service industry, virtually all issues involving customer contact and service provision must be the result of joint decision making involving marketing, operations, finance and human resources, among other departments of the firm. Therefore, while fitting vertically with competitive strategy, the operations strategy needs to also fit horizontally with other functional strategies (Heizer and Render, 1996; Pearce and Robinson, 2000).

2.3.4 The Hayes-Wheelwright Framework

The framework developed by Hayes and Wheelwright (1984) defines four possible stages of OM function's status in any given firm. Based on this framework, the status of OM function is described as 'internally neutral' when it occupies an insignificant position in the view of top management, and its activities are constant and routine. The status of OM function is said to be 'externally neutral' when top management's goal is for OM function to strive to achieve parity with competitors. When competitive strategy has been formulated through a top-down approach and the OM managers are expected to seek to understand the performance priorities, then translate these to necessary actions and procedures, the status of OM function is said to be 'internally supportive'. Finally, the OM function is considered to be 'externally supportive' when top management considers it to be a source of competitive advantage. Therefore, when OM is externally supportive, the

management makes continuous efforts to assess how new capabilities that will lead to new market opportunities can be built into the OM function towards this goal of competitiveness.

2.4 OPERATIONS STRATEGY

2.4.1 Definition of Operations Strategy

There are various definitions including the one by Lawson (2001). Lawson (2001) defines operations strategy as 'major decisions about, and strategic management of core competencies, capabilities, processes, technologies, resources, and key tactical activities necessary in any supply network, in order to create and deliver products or services and the value demanded by a customer'. Slack and Lewis (2002) define operations strategy as 'the total pattern of decisions which shape the long term capabilities of an operation and their contribution to strategy', while Kim and Lee (1993) call it the utilization of capabilities and resources to achieve company goals.

2.4.2 Nature and Role of Operations Strategy

Numerous companies have discovered that operations strategy can lead to an enduring competitive advantage (Boyer, 1998). Skinner (1969), in his landmark paper on manufacturing strategy, argues that operations can indeed be a 'formidable competitive weapon', a view which is reinforced by Skinner (1985). Schonberger (1986) labels operations strategy as 'world class'. More recently, Nohria et al (2003) suggest that focus on operations function coupled with excellent execution of strategy enables companies to out-perform their peers.

After their 10-year-long study that investigated over 200 well established management practices, Nohria et al (2003) arrived at the conclusion that: 'while strategy enables an organisation to remain focused and consistent; excellent execution of strategy requires an organisation to 'develop and maintain flawless operation execution'. Further, Nohria et al (2003) conclude that in order to excel, companies need to 'maintain disciplined attention to operations' and that this is what really counts. Nohria et al (2003) also found that: 'without exception, companies that outperformed their industry peers excelled at what the researchers called 'the four management practices', namely: strategy, execution, culture and structure'.

2.4.3 The development of Operations Strategy

Any Organisation competing in a market segment must identify the key capabilities that the OM function has to develop in order to compete successfully in that particular market (Krajewski and Ritzman, 1999). Dilworth (1992) argues that operations managers must ensure that appropriate strengths are developed within the operations function to be consistent with the broad company-wide strategy. The importance of capabilities in operations strategy comes out strongly in the examples of how various authorities have defined operations strategy (Slack and Lewis, 2002; Kim and Lee, 1993; Lawson, 2001).

When Aosa (1992) definition of Strategy is applied to Operations Strategy, the focus of operations strategy has to be the development of internal capabilities and core competencies that will help the Organisation to achieve its goals within the prevailing

external environment, so as to be competitive in that particular environment. A number of authorities, among them Slack and Lewis (2002) and Lawson (2001) acknowledge that core competencies and internal capabilities do not just happen, they are deliberately built into the organisation.

Some authorities refer to performance priorities that are required for competitiveness as competitive priorities. Operations management literature is generally in agreement regarding the composition of performance priorities, namely: Cost, Quality, Flexibility and Delivery (Boyer, 1998; Adam and Swindass, 1989; e.t.c.). Krajewski and Ritzman (1999) are also in agreement with the above, as they group capabilities as follows:- Cost – the firm focuses on having a low-cost operation by improving efficiencies in its processes and systems, Quality – the firm aims to produce products with high performance and consistent quality, Time – fast and dependable delivery of product/service to the consumers, and Flexibility – response to changes in customer requirements, customization of product/service, e.t.c.

2.4.4 The deployment of Operations Strategy

"Strategy is as good as the results it produces" so declare Russell and TaylorIII (1999), as they emphasize the need for effective deployment of operations strategy. Russell and TaylorIII (1999) go further to postulate that: "good results require that the corporate vision and strategic plan be converted into a series of consistent achievable action plans to be deployed throughout the Organisation". They explain that strategy deployment can be looked at as a planning system for converting strategy to measurable objectives.

George Fisher, one time Chief Executive of Kodak Company, is reported to have made the following statement: 'the difficulty is not in knowing what to do, but in doing it'. Upton (1995) argues that often times, the most difficult challenge that faces operations managers is that of building an appropriate infrastructure consisting of systems, policies routines, and common values of understanding; since it is these that determine the effectiveness of operations strategy deployment. There is also need to acknowledge that infrastructural issues, along side structural issues, are critical in a service industry: since here, the way things are done is not just a matter of style or cost-effectiveness, it defines the product (Neely, 1993).

2.4.5 Operations Improvement Tools and Concepts

Research has shown that Organisations that have employed operations improvement tools and concepts (such as Benchmarking, Total Quality Management-TQM, Just In Time-JIT, e.t.c) have seen changes in their performance (Voss et al, 1997). However, Harrison and Storey (1996) caution that firms should be careful to avoid treating these strategies as 'quick fixes'. Instead, Harrison and Storey (1996) argue that there is need to mobilize commitment at all levels and effectively integrate these strategies into the Organisation. This approach will ensure that a Company does not loose focus in the maze of the many new concepts.

Indeed these new concepts (such as TQM, Benchmarking, JIT, e.t.c.) have been found to help Organisations achieve operational effectiveness (Porter, 1996; Voss et al, 1997;

Harrison and Storey, 1996). Porter (1996) defines operational effectiveness as performing similar activities better than rivals. Porter (1996), however, argues that operational effectiveness is necessary but not sufficient: He notes that though these operations improvement tools do enhance and dramatically improve operational effectiveness, they may fail to provide sustainable profitability. A clear operations strategy will help the Organisation to remain focused and consistent in its quest for competitive advantage. The choice of which of the available concepts to apply will however remain to be the management's (Nazim et al, 1996). Many of these new concepts tend to address the infrastructural issues and the human resource component, which earlier on did not receive much attention in the management of operations (Hayes and Wheelwright, 1984). For example, Miller et al (1981) explain the reason why Japanese did better in the 1980s as being that they 'learnt to achieve maximum performance from all system components, namely: Equipment, Information and most of all, People'. These three components can be considered to summarise the resources of any Organisation. On reviewing literature over the recent years, one can note the shift from exclusive emphasis on structural decisions, to seeking of both structural and infrastructural solutions to operations management problems (Upton, 1995).

2.4.6 Managing the operations improvement process

After an organisation identifies the required performance priorities in line with its competitive strategy, there is need to determine how the necessary capabilities will be built into the organisation in order to achieve performance improvement based on these performance priorities. In order to implement performance improvement programmes, the

concepts and tools cited above have been used (Nazim et al, 1996). Based on the argument of Harrison and Storey (1996), these concepts and tools need to play the role of supporting an existing operations strategy if the ultimate goal is sustainable profitability, rather than short-term gains. However, it may be noted that the approach adopted will determine the speed at which improvement is realised: Dale (1994) addresses this issue. For example, while Re-engineering may provide higher quantum leaps in improvement, there are higher risks when compared with TQM. On the other hand, TQM attempts to achieve steady and sustainable improvement by focusing on quality, continuous improvement and total involvement.

Views on how capabilities can be developed include the cumulative school that suggests that capabilities can be developed, one after the other, each building on the preceding capability while this particular capability at the same time continues to get entrenched in the Organisation. The sequence suggested by Roth and Miller (1992) is Quality, then Dependability, then Flexibility, then Cost. There are other suggestions made by Ferdouws and De Meyer (1990), among others. On the other hand, the 'Productivity Frontier' model suggests that simultaneity of excellence can be achieved, whereby the improvement process seeks to achieve excellence on all the performance priorities simultaneously (Porter, 1998; Porter, 1999). The 'Trade-offs' school suggests that excellence in some performance priorities will be achieved at the expense of other performance priorities.

2.5 THE KENYA POWER AND LIGHTING COMPANY LTD

2.5.1 KPLC's Vision

It can be argued that a Vision statement represents the aspirations of the firm. At KPLC, the vision statement is: 'to achieve world class status as a quality service business enterprise, so as to be the first choice supplier of electricity in a competitive environment' (KPLC, 1998). The achievement of a company's vision can therefore be considered as the key goal that forms the basis of an organisation's corporate objectives. Operational efficiency (for loss reduction and reduction of power outages), as well as growth of customer base are key goals at KPLC (KPLC, 1998). There is need for consistency to be observed between the stated corporate objectives, and the 'strengths and capabilities' that the Organisation develops within the operations function (Dilworth, 1992).

Literature review reveals that attainment of world class status in service/product delivery constitutes a major challenge to the OM function of any firm (Boyer, 1998; Lawson, 2001; Slack and Lewis, 2002; Krajewski and Ritzman, 1999; e.t.c.). It can be argued that any company that seeks to achieve 'world class' status in service delivery has to have a clearly defined operations strategy that effectively supports the competitive strategy of the firm. Krajewski and Ritzman (1999), as well as Gagnon (1999) suggest that appropriate capabilities (in line with the performance priorities) that are necessary for the achievement of a company's competitive strategy have to be identified, developed, deployed and protected. The same view is shared by Lawson (2001).

What KPLC sets out to achieve seems to be clear. Performance priorities that would lead

to the achievement of KPLC's goal of 'world class' competitiveness can be identified since there is consensus in literature regarding the composition of competitive priorities (Boyer, 1998; Adam and Swimdass, 1989; e.t.c.). However, Boyer (1998) argues that for an operations strategy to be seen to be effective, there is need for a link between the "intended operations strategy (performance priorities)" and what is actually realised.

2.5.2 Challenges posed by KPLC's Vision

"Good results require that the corporate vision and strategic plan be converted into a series of consistent achievable action plans to be deployed throughout the Organisation" (Russell and TaylorIII, 1999). Now KPLC is seeking to achieve 'world class' status as a quality service business enterprise, as per the company's vision statement. The main challenge facing KPLC can therefore be summarised as: how to achieve what is implied by KPLC's Vision statement. George Fisher, one time Chief Executive of Kodak Company once observed that 'the difficulty is not in knowing what to do, but in doing it'. Upton (1995) makes the following remark: 'the most difficult challenge is often that of building the appropriate infrastructure (systems, policies, routines, and common values of understanding)'.

Based on Krajewski and Ritzman (1999) argument, KPLC will need to first of all identify, then develop, support and protect the appropriate performance priorities (required capabilities) in line with its business strategy.

Porter (1996) defines 'world class' Organisations as those that operate close to the

productivity frontier. Porter (1996) goes on to define the productivity frontier as: 'the sum of all existing best practices at any given time or the maximum value that a company can create using the best available technologies, skills, management techniques, and purchased inputs'. Achievement of 'world class' status in product/service delivery will therefore demand simultaneity of excellence in all the required competitive priorities.

2.5.3 The Operations Management Function at KPLC

Porter's (1985) generic Value Chain model provides a good reference model for looking at the activities at KPLC. According to Porter (1985), a firm's activities are in two groups: primary activities/core activities and supportive activities/non-core activities. The core and non-core functions at KPLC have been identified based on Porter (1985) model. The 'Product' at KPLC is electricity whose delivery from source to consumer, as well as all related activities, are handled within the Divisions of Transmission and Distribution. These two Divisions are considered to make up the core functions at KPLC. It is noted that besides operations, the two other functions considered core on the Porter (1985) value chain model are also in Distribution Division: namely Marketing and Sales, and Customer Service. The rest of the functions at KPLC can therefore be considered as supportive/non-core.

Porter (1998) perceives the firm as a collection of activities - a set of resources and capabilities, and customer value is created through the Value Chain. Porter (1998) argues that value-adding activities determine what resources and capabilities that are required. Porter (1998) goes on to suggest that: 'activities provide the bridge between strategy and

implementation'. The activities that fall directly on the Value Chain are considered as primary / core activities of the firm. The rest of the activities are considered as 'supportive activities'.

Porter (1985) argues that primary activities make up the core functions of the firm and these consist of Operations, Inbound and Outbound logistics, Marketing and Sales, and Customer Service. At KPLC, the product – 'electricity' gets onto the network at the source and almost instantaneously reaches the consumer. Therefore, inbound logistics, operations and outbound logistics can all be considered to make up the 'Operations Function' at KPLC. Customer service activities should be those activities that go to ensure that the consumer is happy with the electricity product, in a manner that is comparable to after-sales service for tangible products. Based on Porter's (1985) model, activities at KPLC such as Human Resource Management, Information and Technology, Accounting, Supplies and Procurement, as well as General Management are all supportive activities, hence non-core.

At KPLC, there are 6 functional Divisions in addition to the CEO's Office and Company Secretary's Office, namely: (1) Transmission, (2) Distribution, (3) Human Resources and Administration, (4) Planning Research and Performance Monitoring, (5) Information Technology and Telecommunications, (6) Finance Division.

The core operational activities at KPLC are in two Divisions: Transmission Division and Distribution Division. Transmission Division handles all activities relating to design,

construction, operation and maintenance of the electricity transmission system. The Distribution Division includes the following departments: processing of new applications for supply, design, construction, revenue collection and related activities, operation and maintenance, transport, stores, supplies, the workshop, and marketing.

2.5.4 Performance Priorities at KPLC

Based on KPLC's Vision, performance priorities for the operations function can be identified. Performance priorities correspond to operations strategy (Boyer, 1998). Therefore, borrowing from the views of Gagnon (1999) and Krajewski and Ritzman (1999), KPLC needs to effectively develop, deploy and leverage core capabilities and resources that will lead to excellence on the identified performance priorities.

The capabilities and resources that are developed within KPLC's operations function will therefore be a key determinant of the level of excellence in the identified performance priorities. According to (Boyer, 1998), operations management literature is generally agreed on the following as capabilities that lead to improved performance:- (1) capability to do things right for quality advantage, (2) capability to do things fast for speed and delivery advantage, (3) capability to do things on time for dependability advantage, (4) capability to be flexible in meeting changing customer requirements. Roth and Miller (1992), Adam and Swindass (1989), Ferdeouws and De Meyer (1991), among others are also in agreement that quality, speed / delivery, flexibility, reliability and cost are the basic performance priorities.

The above performance priorities can be applied to KPLC as follows (KPLC, 1998): quality electricity will relate to KPLC's structural capacity in its transmission and distribution networks, infrastructural systems, technical competencies, communication, motivation, e.t.c. Reliability of electricity supply will relate to system design issues, equipment quality, preventive maintenance regimes, in-built flexibility and redundancies, e.t.c. Timeliness/responsiveness/dependability in electricity service delivery will relate to issues of infrastructure, communication, motivation, culture, information flow, e.t.c.. Low Cost of electricity service delivery must relate to the purchase price of electricity, minimization of system losses, minimization of non-value adding activities, e.t.c.

It needs, however, to be noted that although the purchase price of electricity is a key determinant of the cost of electricity to the consumer, KPLC's purchase price is largely influenced by the current structure of the electricity market (Kiiru, 2002). Further, Kiiru (2002) informs that studies conducted on the electricity industry by consultants revealed that about 75% of KPLC's expenditure goes towards energy purchase'. This implies that the consumer price of electricity is highly influenced by KPLC's purchase price, which price is in turn influenced by many factors.

2.5.5 Improvement Initiatives at KPLC

In his study on KPLC, Thiga (1999) sought to look at the business process re-engineering that was taking place at the Company. Over the recent years, since 1994, KPLC has implemented several change initiatives aimed at improving efficiency in the delivery of electricity supply service. Recently, there have been press reports attributable to KPLC's

Chief Executive Officer, to the effect that there are improvement initiatives whose main targets are: reduction of system losses, reduction of outages, improvement of the quality of electricity as well as growth of customer base.

As evident from the Company's vision and corporate objectives, KPLC management appears to want to go beyond mere improvement of operational efficiency (KPLC, 1998). The Company seeks to position itself to gain competitive advantage in an anticipated competitive environment (Thiga, 1999). A pointer to this strategy can be seen in the Company's vision statement which has been stated thus: 'to achieve world class status as a quality service business enterprise so as to be the first choice supplier of electricity in a competitive environment' (KPLC, 1998).

3: RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

The research design was an exploratory case study on Kenya Power and Lighting Company Limited (KPLC). Based on Porter (1985) Value Chain model, the operations function at KPLC was identified to consist of Transmission and Distribution divisions, excluding the marketing department. It was noted that at KPLC, the customer service function tends to overlap with the operations function. Dilworth (1992) notes that this has been observed in service operations, whereby the customer relations/customer services function tends to overlap with the operations function. For this reason, the customer service function was included in the study.

Noting, that there are four administrative regions at KPLC, the research covered both the central office and the regions. It is also noted that KPLC began its change efforts about 10 years ago, around 1994 (Thiga, 1999) and this aspect was also be examined. Further, responses from top management and middle management were also compared.

Case studies have been used before in exploratory studies (Eisenhardt, 1989; Voss et al, 2002). However, Voss, et al (2002) also note that case studies, when conducted by experienced researchers utilizing appropriate design and techniques, can lead to new and creative insights, development of new theory and have high validity with practitioners who really are the ultimate users of research. The aspect of validity to the user and the

possible applicability of the findings was a major driver behind the choice of case study design.

Further, the choice of an exploratory design has a key goal of seeking to open up issues for future research through exploring the theory of operations strategy as applied to a typical utility company. Exploratory case studies are often utilized in this way in the practice of research (Cooper and Schindler, 1999).

3.2 POPULATION, SAMPLE FRAME AND SAMPLING PROCEDURES

The population consisted of the top management staff and the middle management staff at KPLC. The focus of the research being on the operations function at KPLC, an appropriate sampling frame was considered to consist of top and middle management staff in Transmission Division, plus all top and middle management staff in Distribution Division (excluding marketing staff). The size of the Sample Frame was 105. Considering that a hundred percent response rate could not be guaranteed, the Sample of 105 (equal to the Sampling frame) was taken.

3.3 DATA COLLECTION METHODS AND INSTRUMENTS

Data collection was by use of a Questionnaire that utilised structured closed-ended questions. The closed-ended question design was chosen due the sensitivities associated with sharing of information in government and parastatal firms.

The Questionnaire was mailed to the respondents outside Nairobi. Within Nairobi city, the instruments were hand-delivered. In seeking to enhance response rate, the potential benefits of the research to KPLC was cited in the cover letter. Also cited in the brief cover letter was the reference of the permission from KPLC to conduct such a research. To further enhance response rate and avoid questions, the purpose of the research was clearly explained to the respective Regional Managers and departmental Heads, even as Questionnaires were sent to them as well.

The Questionnaire was designed to address the two objectives of the study, by addressing the issues of:- (i) the extent of contribution of the OM function, at KPLC, to the various aspects of conception, development and deployment of competitive strategy, and (ii) the challenges facing the integration of operations strategy into the overall competitive strategy at KPLC.

In addressing the first objective of the research, the Questionnaire sought to tap the respondents' perceptions on the level of the contribution by OM function to various aspects of strategy conception, development and deployment. Likert 4-point rating scale was utilized. Further, in addressing the same objective the status of operations' performance priorities at KPLC was also examined. The required performance priorities for the operations function at KPLC had already been identified based on the company's objectives and literature review. The approach that was adopted is justified by the view that for the OM function to effectively contribute to competitive strategy, there has to be an operations strategy that is effectively deployed. The existence of a clear and coherent

operations strategy can be considered to be vital in complementing the contribution by OM function to the development of competitive strategy. This view is based on the views of Gagnon(1999), Krajewski and Ritzman(1999), Rusell and TaylorII(1999, among other authorities, who suggest that successful strategy deployment can be realised through:- (a) identification of appropriate performance priorities for the OM function, in line with the company's competitive strategy; (b) deliberate action plans and policies towards improvement on the identified performance priorities; (c) effective vertical linkages with the top management in terms of leadership, investment decisions, e.t.c.; (d) effective horizontal linkages in terms alignment of functional strategies and effective co-ordination between activities of OM function and activities in other functions.

In addressing the second research objective the Likert-5point rating scale was utilized to tap the perceptions of respondents on the challenges experienced in integrating operations strategy into the overall competitive strategy at KPLC.

In addition to using the Questionnaire, the researcher reviewed the available relevant documents at KPLC. Interviews with the selected Managers at KPLC were also conducted. The Managers selected were those who played some key roles in the change efforts. The major aim of the interviews was to seek to find out the objectives of performance improvement initiatives (specifically on the OM function), the achievements of the recent business process re-engineering and the philosophy of operational improvement as well as performance measurement and monitoring.

3.4 DATA ANALYSIS METHODS

The data collected was edited for accuracy, uniformity, consistency and completeness. Coding of the data was done in preparation for subsequent analysis. Analysis was by use of descriptive statistics: statistical averages, percentages and frequency. Further, factor analysis was done on the second research objective. Descriptive statistics have often been used in exploratory studies (Cooper and Schindler, 1999). A computer-software (SPSS) was used to aid the analysis. The results have been presented using tables, graphs and charts.

On the aspect of the perceptions on the 'status of performance priorities', analysis of the following categories was also done and compared:- (a) regional vs central office responses; (b) responses from 10 years and above employees vs those below 10 years (c) responses from top management vs responses from middle management.

Further, in investigating challenges experienced in the integration of operations strategy (OM performance priorities) into competitive strategy, the following categories of possible challenges were examined: (a) strategy deployment issues; (b) people issues, (c) information issues and (d) equipment issues. This approach is based on the views of Miller et al (1981), that success will require a focus on what the researchers called: 'all system components, namely: Equipment, Information and People'.

4: FINDINGS

4.1 COMPOSITION OF RESPONDENTS

Out of the 105 Questionnaires sent out, 82 duly completed Questionnaires were received. The response rate was therefore about 80%. 62% of the respondents had worked at KPLC for 10 years or more, while the rest had worked at KPLC for less than 10 years. On categorization by level of seniority, 28% of the respondents were found to be above the rank of Senior Engineer (these are management staff in the topmost management category at KPLC, in KPLC terms - the executive level). When categorized based on station of work, 62% of the respondents were found to be in regional management while the rest were employees at the central office.

4.2 AWARENESS AND INTERPRETATION OF KPLC'S COMPANY VISION

The findings show that 88% of respondents rate their understanding and interpretation of KPLC vision as good or better, with 38% rating their understanding and interpretation of KPLC vision statement as very good. None of the respondents said they do not know the company vision.

4.3 OM'S CONTRIBUTION TO COMPETITIVE STRATEGY

4.3.1 OM's contribution to the development of strategy at KPLC

Table 4.1 gives the details of respondents' perceptions on the contribution of OM to the aspects of strategy conception and development. On the various aspects competitive strategy development, frequencies of respondents who consider OM's contribution to be

very significant vary from 11% (for determination of corporate objectives and targets) to 38% (for identification of training needs). The contribution of OM in the identification of market needs is also rated relatively lower. An interesting finding is that while 76% of respondents consider OM's contribution in the identification of training needs as being either significant or very significant, only 46% rate OM's contribution to the determination of training budget to be either significant or very significant.

	Very Significant	Significant	Insignificant	Don't know
Customer needs assessment	17	51	21	1
Identifying new markets	20	26	49	6
Determination of operational performance objectives	26	48	22	1
Determination of corporate objectives and targets	11	16	38	9
Decisions on investment in Capital projects	26	51	17	2
Identification of training needs for operational staff	38	38	16	4
Determination of training budget	23	23	38	1
Initiating improvement ideas for operations	34	35	16	1
Initiating improvement ideas for the whole business	31	35	24	1

Table 4.1: Contribution of OM to the development of strategy (in %frequencies)

4.3.2 OM's contribution to strategy deployment at KPLC

On issues of strategy deployment, an average of 60% or more respondents consider the contribution of operations function to be either significant or very significant. However, there are exceptions: for example, only 7% of respondents consider OM's contribution to the development of OM operational procedures and policies as very significant, compared to a 33% who say the contribution of OM to the 'design of organizational

structure' is very significant. Another interesting finding is the relatively higher percentage, 13%, of respondents who do not know the contribution of OM to the monitoring of service quality. Again the contribution of OM to the development of performance measurement systems is rated lower than that of 'design of infrastructure' as well as 'design of organizational structure'. Table 4.2 provides a more detailed summary of findings.

	Very Significant	Significant	Insignificant	Don't know
Design of Organisation structure	33	35	21	1
Development of performance measurement systems	18	46	22	1
Monitoring of performance and quality of service	16	44	27	13
Design of infrastructure and other physical systems	26	42	27	6
Development of policies and procedures for operations	7	39	38	2

Table 4.2: Contribution of OM to strategy deployment aspects (in percentage frequencies)

4.4 STATUS OF OPERATIONS STRATEGY AT KPLC

Based on literature review, the operations' performance priorities on which KPLC must excel in order to realize its vision had been identified. On a 4-point Likert Scale, respondents were asked to indicate how many marks they would give KPLC for its efforts with regard to the performance priorities of quality, reliability, timeliness and cost. The average frequency (%) of respondents who would award KPLC either 'high marks' or 'very high marks' on the aspect of 'importance attached' to each priority, was found to be highest for the priority of 'reduction of losses and costs', that is 60%. The lowest frequency on this same aspect was observed for 'timeliness of service delivery' at 48%

suggesting that KPLC management places greater importance to the reduction of losses and costs than on improvement of the speed of service delivery.

On the aspect of 'top management support', again the frequency of 'very high marks' response was highest for the priority of 'reduction of losses and costs', that is 21%. On the other performance priorities, the corresponding findings were: 12%, 13% and 11% for quality, reliability and timeliness, respectively.

On the aspect of 'effectiveness of the current approach to improvement', and 'effectiveness of coordination of all related activities towards improvement', the number of respondents who awarded 'very high marks' for KPLC's efforts were relatively fewer when compared to the findings on the other two aspects:- The frequencies of 'very high marks' responses were 5%, 1%, 2% and 10%, for quality, reliability, timeliness and cost, respectively. On these same aspects, the frequencies of 'high marks' responses were also lower when compared to the other two aspects of 'importance attached' and 'top management support'.

Performance Priority	Importance attached to this priority	Effectiveness of current approach to improvement	Top Management support	Effectiveness of coordination of all related activities
Quality	56	47	51	31
Reliability	55	46	59	36
Timeliness	48	45	49	30
Cost	60	49	59	39

Table 4.3: Perceptions on KPLC's current efforts: combined % frequencies of 'very high marks' and 'high marks' responses

4.4.1 Importance attached to OM's performance priorities

On the aspect of 'importance attached to each performance priority', the average percentage frequency of 'very high marks' response was 28% among those employees who have worked at KPLC for 10 years and above, compared to the corresponding average frequency of 15% among those who have worked for KPLC for less than 10 years. Analysis of results from respondents above the level of Senior Engineer in rank suggests that 14% would award 'very high marks' for 'the importance attached to the performance priorities; the corresponding figure for respondents at the level of Senior Engineer and below is 25%. Interestingly, similar frequencies for Regional respondents are higher, 28% would award 'very high marks' compared to 14% at central office.

4.4.2 Effectiveness of current improvement approach on OM's performance priorities

On the aspect of 'effectiveness of the improvement approach on each performance priority', the average percentage frequency of 'very high marks' response was 18% among those employees who have worked at KPLC for 10 years and above, compared to the corresponding average frequency of 10% among those who have worked for KPLC for less than 10 years. The average frequency of 'very high marks' was similar for all respondents irrespective of rank, at about 14%. Similarly for Central Office and Regional categories the findings were similar, at about 15% of 'very high marks' responses.

4.4.3 Top management support for improvement on OM's performance priorities

On the aspect of 'top management support for performance priority', the average percentage frequency of 'very high marks' response was 18% among those employees

who have worked at KPLC for 10 years and above, compared to the corresponding average frequency of about 5% among those who have worked for KPLC for less than 10 years. Analysis of results from respondents who are above the level of Senior Engineer in rank suggests that about 9% would award 'very high marks for 'the importance attached to the performance priorities; the corresponding figure for respondents at the level of Senior Engineer and below is 14%. It is interesting to note that though there are high variances between responses in various categories, on this particular aspect the frequency of 'very high marks' response is consistently high for the priority of 'reduction of losses and costs, at 20% and above irrespective of category. Another interesting result is that the 'high marks' frequencies on this aspect are higher in the regions than at the central office.

4.4.2 Effectiveness of coordination of all related activities towards improvement on OM's performance priorities

On the aspect of 'effectiveness of coordination of all related activities for excellence on each priority', very low frequencies of 'very high marks' responses are observed respondents of high rank, and also among those who have been at KPLC longest. The 'high marks' frequencies tend to be lower among respondents in the regions than respondents in central office.

4.5 CHALLENGES IN THE INTEGRATION OF OM'S PERFORMANCE PRIORITIES INTO COMPETITIVE STRATEGY

About 19 possible challenges were listed and respondents were asked to indicate the extent of their agreement or disagreement that these constituted major challenges at

KPLC, based on Likert 5-point Scale. It was found that the combined frequencies of 'agree' and 'strongly agree' responses were between 56% and 77% on all the 19 possible challenges listed. The highest frequency of 'agree or strongly agree' responses was observed on 'physical infrastructure' followed by 'organisation structure' (75%). The lowest 'agree' frequencies are on 'motivation policies' and 'communication channels'.

In order to conduct further analysis on challenges experienced, while at the same time attempt to reduce the number of variables, Factor analysis was carried out. Five principal components were extracted (Appendix III includes a table of communalities that indicates the level of variances explained by the extracted components). In order to clarify the variances further, rotation was done using Varimax with Kaiser Normalization (Table 4.4 gives the results for the first five components extracted).

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared loadings		
	Total	%of Variance	Cumulative %	Total	%of Variance	Cumulative %
1	6.698	35.254	35.254	3.329	17.25	17.52
2	1.886	9.925	45.179	2.965	15.608	33.128
3	1.261	6.637	51.816	2.445	12.866	45.994
4	1.09	5.737	57.552	1.827	9.616	55.61
5	1.075	5.657	63.209	1.444	7.599	63.209

Table 4.4: Factor analysis results

Appendix III also includes the component matrix showing correlations between variables and components.

In summary it was found that the challenges at KPLC are mainly to do with the following:-

- Translation of corporate vision into action plans and policies
- Coordination of related activities in different divisions
- Issues of physical infrastructure and issues to do with training of operational staff and skills upgrading
- Organisation structure
- Issues of Salary and other monetary incentives

4.5.1. Challenges: Strategy deployment issues

On the various aspects of strategy deployment, ‘strongly agree’ frequency of responses ranged from 20% (for coordination issues) to 43% (for organizational structure. On strategy deployment issues, the number of respondents who strongly believe that challenges are to do with ‘appropriate training and skills upgrading’ as well as ‘supervisory weaknesses’ is relatively higher than the rest, at 39% and 32% respectively.

4.5.2 Challenges: People issues

On the three issues of company culture, persistent resistance to change and ownership of company vision by unionisable employees, an average of 34% respondents strongly agree that these constitute a major challenge to the integration of operational performance priorities into competitive strategy at KPLC.

4.5.3 Challenges; information issues

A good percentage (average 20%) of respondents strongly agree that information issues are part of the challenges facing the integration of OM priorities into competitive strategy at KPLC. However, on information issues, the percentage of 'strongly agree' responses is lower when compared to most strategy deployment issues, people issues, as well as issues to do with infrastructure and equipment.

4.5.4 Challenges; Equipment and structural issues

Almost half of the respondents strongly agree that issues to do with the transmission and distribution structures are a challenge to the effective integration of operational performance objectives into the overall competitive strategy at KPLC. Also, issues to do with equipment and tools for the operations constitute a major challenge, since 74% of respondents either agree or strongly agree with this particular proposition.

5: SUMMARY AND CONCLUSIONS

5.1 OM'S CONTRIBUTION TO COMPETITIVE STRATEGY AT KPLC

One of the objectives of this study was to establish the extent to which the OM function contributes to competitive strategy at KPLC. The data collection instrument sought the responses on the level of contribution by OM function to each item in a set of 14 aspects of strategy development. On average, the contribution of OM function to strategy conception was rated lower than OM function's contribution to strategy deployment. Strategy conception aspects are considered to include customer needs assessment, determination of corporate objectives, targets and identification of new markets etc. On the other hand, strategy deployment is considered to include issues such as design of infrastructure and other systems, design of organisational structure, development of performance measurement systems, etc.

There are, however, some interesting variations. For example while 11% of respondents rate OM function's contribution to 'determination of corporate objectives and targets' as very significant, the corresponding result for 'identification of training needs' is 38%. Training is an important tool for strategy deployment and hence the need for congruence between the corporate objectives and the identified training needs. Another interesting result is that while an average of 33% respondents consider the role of OM in initiating improvement ideas as very significant, the corresponding frequency for customer needs assessment and identification of new markets is 19%. The implication of this mismatch is appreciated when one considers that new improvement ideas should essentially be in

line with customer needs and anticipated new markets. Generally therefore, it can be concluded that while the OM function appears to play a key role in strategy implementation at KPLC, it does not seem to contribute equally to the process of development of competitive strategy.

5.2 STATUS OF OPERATIONS' PERFORMANCE PRIORITIES AT KPLC

The investigation of the status of operations' performance priorities was based on the recognition that effective contribution of OM function to competitive strategy can best become evident if there is a coherent operations strategy. The presence of an operations strategy implies that operations' performance priorities in line with the competitive strategy have been identified and are supported through the building of the necessary capabilities and the deployment of the necessary resources. The investigation of perceptions on the status of performance priorities at KPLC appears to suggest that top management at KPLC generally attach high importance to the priorities that are necessary for the realisation of the company's objectives. A similar result is observed for top management support for continuous improvement on operations' performance priorities at KPLC. However, in both cases the findings suggest that the importance attached to, and the support given to the 'delivery of timely services' is rated lower than the rating of the other priorities namely quality, reliability and cost. The findings also suggest that the current approach towards improvement, on the operations' priorities, is not effective enough. And on the aspect of 'coordination of all related activities at KPLC towards improving on the performance priorities', KPLC scores relatively low marks in the eyes of the respondents. One conclusion can be that the OM function at KPLC is currently in a

position to contribute effectively to competitive strategy since its performance priorities are considered important and are supported by top management. However, issues of effective coordination of all related activities towards excellence on the OM performance priorities need to be addressed. Also, in relative terms, dependability of service delivery (i.e. timeliness) is not adequately addressed when compared to the other OM performance priorities. With regard to continuous improvement based on OM performance priorities, the findings appear to suggest that KPLC needs to appraise the effectiveness of the current approach to continuous improvement.

5.3 CHALLENGES IN THE INTEGRATION OF OM'S PERFORMANCE PRIORITIES

Based on the 19 possible challenges for which respondents were asked to express their level of agreement or disagreement, the percentage of those who either agreed or strongly agreed was generally high on all challenges being investigated. However, it was observed that the frequency of 'agree' and 'strongly agree' was marginally higher for 'people issues' than for 'strategy deployment issues'. This may suggest a need to assess how certain people issues are aligned to competitive strategy at KPLC. For example, on the aspect of ownership of company's vision by unionisable employees, the most frequent response was a strong agreement that it constitutes a challenge. Of the three groups of issues considered important by Miller et al (1981), namely:- equipment, information and people, the respondents considered equipment issues as a major challenge alongside physical infrastructure. The frequency of those who strongly agree that salary and monetary benefits is a major challenge is also relatively lower when compared to issues such as

ownership of vision and issues to do with company culture. It is also worth noting there is a high level of agreement that challenges to do with translation of vision into policies and action plans are a major factor. These findings suggest that there may be need for a review of how competitive strategy is translated into action plans and policies at KPLC. As Russell and Taylor (1999) argue, this aspect is important in the achievement of good results through the process of strategy implementation.

When factor analysis was conducted using Principal Component Extraction method, and rotation using Varimax with Kaiser Normalization, challenges faced in the integration of OM's performance priorities into Competitive strategy at KPLC has to do mainly with:- (a) Translating corporate vision into action plans and policies; (b) Coordination of related activities in different Divisions at KPLC; (c) Organisation Structure and (d) Physical infrastructure. The findings also reveal that issues to do with appropriate training and skills upgrading for operational staff also constitutes a significant challenge.

These findings suggest a need to further investigation of these issues at KPLC, especially the first four issues.

5.4 LIMITATIONS OF THE STUDY

There was no major challenge against successfully conducting the study, as there was cooperation from all concerned. However, the very nature of the research design provided a limitation on the validity of the findings. A case study that focuses on an individual firm provides very little room for generalisation. However, the findings have high validity to the ultimate users of research, in this case KPLC. Despite these limitations, it can be

appreciated that a case study like this one does open up issues that would enable subsequent research that will be more focused.

5.5 RECOMMENDATIONS FOR FURTHER RESEARCH

An analysis of the findings of this study reveals many possible areas of future research, some of which have been listed below:-

- i. It will be interesting to conduct a longitudinal study on KPLC or any other utility company to investigate the linkages between what Boyer (1998) calls 'conceptualised strategy (performance priorities)' and what is actually realised by the company. Interesting findings are also likely to be realised if multiple case study approach is adopted, that may involve a number of utility Companies.
- ii. An investigation of the contribution of OM to competitive strategy in utility companies, using a well-known model, like the Hayes-Wheelwright Framework may be considered.
- iii. Rusell and TaylorIII (1999) argue that it is important to ensure that corporate vision is effectively translated into action plans and policies. There may be need to investigate the mechanisms used by service companies to achieve this translation, their effectiveness and the challenges faced.
- iv. The findings of this research show that the coordination of OM function with other functions at KPLC may not be effective enough in contributing to excellence on the operational performance priorities. There is need to investigate this aspect of strategy implementation through a survey that focuses on the horizontal linkages in the effective implementation of strategy.

- v. Among other findings, the study found that a large majority of respondents consider issues to do with company culture to be one of the important challenges that impact on the successful integration of OM performance priorities into competitive strategy at KPLC. It might be interesting to conduct a survey on service companies focusing on this aspect. The sample for such a study should include companies that have implemented philosophies that address this issue (e.g. Total Quality Management) in order to assess the difference.
- vi. The findings of this study reveal that while the effectiveness of the approach to improvement is rated relatively low, the effectiveness of coordination between all related activities is rated even lower. Could the poor coordination of all related activities have anything to do with the lack of effectiveness of the current approach towards improvement (thus suggesting that the current approach to improvement is not so poor after all)? This could be an interesting question to investigate.

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APPENDIX I

THE RESEARCH QUESTIONNAIRE

1. Please indicate how long you have been working for KPLC
 Less than 10 years 10 years and above

2. Are you above the rank of Senior Engineer/Senior Officer?
 Yes No

3. Are you in Regional Management or Central Office:-
 Regional Management Central Office

4. How would you rate the contribution by the various departments in Transmission and Distribution Divisions (*excluding marketing department*) to the following aspects of strategy development at KPLC. *Given:-* No contribution =1; Insignificant =2; Significant =3; Very Significant =4
Don't know =0

Write 1 or 2 or 3 or 4 or 0 in the space provided

Customer needs assessment	
Identifying new markets	
Determination of operational performance objectives	
Decisions on investment in Capital projects (e.g. New lines, Substations,)	
Identifying training needs for the operational staff	
Determining size of training budget	
Determining corporate objectives and targets	
Design of organisational structure	
Development of performance measurement systems	
Development of policies and procedures for operations	
Monitoring performance and quality of service	
Design of infrastructure and other physical systems	
Initiating operations improvement ideas	
Initiating improvement ideas for the whole business	

5. How would rate your understanding and interpretation of KPLC's Vision Statement:

Don't know it Fair Good Very Good

6. For each of KPLC's Operational Objectives listed horizontally below, how many Marks would you give for KPLC's efforts on the aspects **A, B, C, and D** ?

1 = Low Marks; 2 = Average Marks; 3 = High Marks; 4 = Very High Marks

0 = No idea

Write 1 or 2 or 3 or 4 or 0 in the space provided

		Quality of electricity supplied	Reliability of electricity supplied	Delivery of timely and dependable services	Reduction of system losses and overall costs
A	Importance accorded to this priority, by KPLC management				
B	Effectiveness of current approach to improve, on this priority				
C	Top management support, through action-plans and policies, to improve on this priority				
D	Effective co-ordination of all related Company activities, for improvement on this priority				

7. The Operational Objectives at KPLC have been identified as Quality, Reliability & cost-effectiveness of the electricity supplied, and Timeliness of service delivery. Possible challenges experienced in integrating these objectives into the overall Company Strategy are given below.

Please indicate, by a tick, the extent of your agreement or disagreement

Challenges experienced are to do with :-	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
Translating corporate vision into policies, plans and actions					
Prioritization of company objectives					
Current performance measurement methods					
Delegation of authority					
Coordination of related activities in Transmission & Distribution on one hand, and other KPLC Divisions					
Coordination of related activities within Transmission and Distribution Divisions					
Salary and other monetary incentives					
Issues relating to Company culture					
Ownership of Company Vision by management staff					
Ownership of Company Vision by unionisable employees					
Persistent resistance to change					
Organisational structure					
Shortcomings in Information Technology (IT) systems					
Supervisory weaknesses					
Investment in appropriate staff training and upgrading of skills					
Communication channels					
Motivation policies					
Current physical structures for electricity transmission and distribution					
Equipment and tools for Operations					

APPENDIX II

STATUS OF OM'S PERFORMANCE PRIORITIES AT KPLC

Below are tables giving a comparative analysis of responses from various categories on the status of the OM function's performance priorities at KPLC. The tables only show the percentage (%) frequencies of 'very high marks' awarded by the respondents on each of the four aspects that were investigated: i.e. (a), (b), (c), and (d).

(a) Importance attached to OM's performance priorities by KPLC

	YEARS AT KPLC		SENIORITY		STATION OF WORK	
	Less than 10 yrs	10yrs and above	Above Senior Engineer	Senior Engineer and below	Regions	Central office
Quality of electricity supplied	16	28	13	27	30	13
Reliability of electricity supplied	13	28	17	24	30	10
Timeliness/Dependability	3	22	13	15	18	10
Cost / Reduction of Losses	23	32	17	32	31	23

(b) Effectiveness of the current approach to improvement on OM's performance priorities

	YEARS AT KPLC		SENIORITY		STATION OF WORK	
	Less than 10 yrs	10yrs and above	Above Senior Engineer	Senior Engineer and below	Regions	Central office
Quality of electricity supplied	10	18	17	14	16	13
Reliability of electricity supplied	10	18	13	15	14	16
Timeliness/Dependability	7	16	4	16	10	16
Cost / Reduction of Losses	13	20	13	19	16	19

(c) Top management support through policies and action plans on each of OM's performance priority

	YEARS AT KPLC		SENIORITY		STATION OF WORK	
	Less than 10 yrs	10yrs and above	Above Senior Engineer	Senior Engineer and below	Regions	Central office
Quality of electricity supplied	7	16	9	14	14	10
Reliability of electricity supplied	7	18	9	15	16	10
Timeliness/Dependability	3	16	9	12	14	7
Cost / Reduction of Losses	19	22	22	20	20	23

(d) Effectiveness of co-ordination of all related activities on each performance priority

	YEARS AT KPLC		SENIORITY		STATION OF WORK	
	Less than 10 yrs	10yrs and above	Above Senior Engineer	Senior Engineer and below	Regions	Central office
Quality of electricity supplied	16	8	4	5	6	3
Reliability of electricity supplied	19	2	23	2	2	19
Timeliness/Dependability	19	4	17	3	2	3
Cost / Reduction of Losses	7	12	9	10	14	3

Total Variance Explained

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	6.698	35.254	35.254
2	1.886	9.925	45.179
3	1.261	6.637	51.816
4	1.090	5.737	57.552
5	1.075	5.657	63.209
6	.988	5.200	68.408
7	.841	4.426	72.835
8	.770	4.051	76.886
9	.740	3.895	80.781
10	.635	3.341	84.122
11	.554	2.917	87.039
12	.539	2.836	89.875
13	.409	2.153	92.027
14	.376	1.977	94.004
15	.308	1.619	95.624
16	.285	1.502	97.126
17	.234	1.232	98.358
18	.186	.977	99.335
19	.126	.665	100.000

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.698	35.254	35.254	3.329	17.520	17.520
2	1.886	9.925	45.179	2.965	15.608	33.128
3	1.261	6.637	51.816	2.445	12.866	45.994
4	1.090	5.737	57.552	1.827	9.616	55.610
5	1.075	5.657	63.209	1.444	7.599	63.209
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component				
	1	2	3	4	5
Translating corporate objectives into policies, plans and actions	.558	.393	-.118	.030	-.464
Prioritization of company objectives	.682	.109	.007	-.130	-.492
Current performance measurement methods	.469	.261	.174	-.317	.135
Delegation of authority	.469	.637	.109	.011	.266
Coordination of related activities between OM and other Divisions	.476	.680	.157	.170	.009
Coordination of related activities within OM Divisions	.527	.108	.376	.409	.355
Salary and other monetary incentives	.390	-.392	-.073	.496	.214
Issues relating to Company culture	.618	-.043	-.444	-.003	.219
Ownership of Company vision by management staff	.469	-.027	.428	.072	-.132
Ownership of Company vision by unionisable employees	.788	.111	-.094	-.240	.037
Persistent resistance to change	.528	-.199	.325	.173	-.204
Organisational structure	.677	-.513	.226	-.058	-.005
Shortcomings in IT systems	.630	-.376	.325	-.328	-.072
Supervisory weaknesses	.478	-.098	-.054	.455	-.327
Investment in appropriate training and skills upgrading	.822	.026	-.230	-.091	.079
Communication channels	.471	-.145	-.404	.183	-.126
Motivation policies	.625	.160	-.244	.092	.170
Current physical structures for transmission and distribution	.724	-.225	-.300	-.155	.060
Equipment and tools for operations	.654	-.222	.117	-.209	.286

Extraction Method: Principal Component Analysis.

a. 5 components extracted.

Rotated Component Matrix^a

	Component				
	1	2	3	4	5
Translating corporate objectives into policies, plans and actions	.251	.062	.331	.718	-.060
Prioritization of company objectives	.294	.392	.173	.678	-.083
Current performance measurement methods	.223	.345	.467	.036	-.222
Delegation of authority	.201	.015	.813	.075	-.024
Coordination of related activities between OM and other Divisions	.071	-.013	.788	.336	.070
Coordination of related activities within OM Divisions	.071	.310	.559	-.069	.552
Salary and other monetary incentives	.316	.163	-.072	-.052	.685
Issues relating to Company culture	.761	.072	.142	.062	.142
Ownership of Company vision by management staff	-.057	.511	.252	.243	.198
Ownership of Company vision by unionisable employees	.590	.400	.360	.241	-.079
Persistent resistance to change	.037	.526	.090	.315	.332
Organisational structure	.330	.760	-.080	.087	.276
Shortcomings in IT systems	.242	.829	-.002	.105	-.022
Supervisory weaknesses	.183	.129	.010	.518	.486
Investment in appropriate training and skills upgrading	.704	.320	.289	.236	.084
Communication channels	.531	.016	-.089	.317	.253
Motivation policies	.569	.076	.359	.151	.179
Current physical structures for transmission and distribution	.730	.361	.019	.154	.070
Equipment and tools for operations	.460	.586	.198	-.122	.085

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 10 iterations.

Component Transformation Matrix

Component	1	2	3	4	5
1	.618	.542	.387	.354	.223
2	-.125	-.454	.792	.240	-.305
3	-.710	.615	.311	-.105	.099
4	-.168	-.345	.072	.173	.904
5	.266	-.048	.348	-.881	.172

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Dear Sir / Madam,

Ref: RESEARCH QUESTIONNAIRE (ATTACHED)

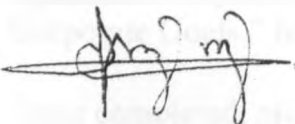
Permission has been obtained (Ref. STAFF/NENGO/14979/AAA/fom) to conduct a research on how our current operational set up is assisting in the pursuit of KPLC's overall goal of 'world class' competitiveness, as is our company's vision.

This letter is to request you to kindly complete the Questionnaire attached. The Questionnaire is designed to take you 5-10 minutes to complete. No identity or names are required.

Besides the academic purpose of the research, the findings will most likely be found valuable to all of us at KPLC in our quest for 'world class' competitiveness.

Thanking you in anticipation of your co-operation, it is highly appreciated.

Signed,



Kennedy M. Nengo

NOTE:

After completing the Questionnaire, please put it in the self-addressed envelope provided and close. PLEASE LET THE CLOSED ENVELOPE BE DELIVERED AS ADDRESSED.

Alternatively:-

Someone will come with a collection bag, into which you'll drop the completed Questionnaire.



**The Kenya Power & Lighting
Co. Ltd.**

The Kenya Power & Lighting Co. Ltd.
Central Office - P.O. Box 30099 Nairobi, Kenya
Telephone - 254-02-243366-Telegrams 'ELECTRIC'
Telex No . 22253 Fax No . 254-02-337351
Stima Plaza, Kolobot Road

Our Ref: STAFF/NENGO/14979/AAA/fom

Your Ref:

13th November, 2003

Kennedy M. Nengo, S/No. 14979

Thro' Chief Manager, Planning, Research & Performance Monitoring 14/11

Dear Sir,

MBA RESEARCH PROJECT

This is to inform you that your request to carry out research on "How Effectively our Operational Systems and set up are Assisting us Towards the Achievement of Corporate Goals." has been approved.

Once completed, please provide us with a copy for the Executive Library.

Yours faithfully,

For: KENYA POWER & LIGHTING CO. LTD.

Agustine A. Amboka

For: TRAINING & DEVELOPMENT MANAGER