

**OPERATIONS PLANNING AND PERFORMANCE OF MOTOR
VEHICLE ASSESSMENT FIRMS IN NAIROBI**

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for the award of the Degree of Master of Business Administration, School
of Business, University of Nairobi**

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DECLARATION

This research project is my original work and has not been submitted for the award of a degree or any other qualification in any other university.

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

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DEDICATION

To my son, Fadhili.

ABSTRACT

Operations planning make the needs of the business strategy specific to the operations function by focusing on the right competitive priorities. The study sought to investigate the influence of operations planning on firm performance among motor vehicle assessment firms in Nairobi. The study adopted a descriptive survey research design and was guided by the following objectives: to identify the various operations planning practices adopted by motor vehicle assessment firms in Nairobi; and to establish the relationship between operations planning practices and firm performance among motor vehicle assessment firms in Nairobi. Both secondary and primary data was utilized in the study. Primary data was collected using a semi-structured questionnaire. Secondary data was obtained from the annual financial and corporate reports of the firms. The respondents in the study were managers of the motor vehicle assessment firms. A census approach was applied in the study in which case, the sampling frame consisted of all the 101 motor vehicle assessment firms Nairobi County. A 5-point Likert scale was used to measure the output of each item answered by the participants. Descriptive statistics was used to describe and analyse the variables numerically. Using SPSS version 21 package, a Multivariate regression model was used to analyse the relationship between operations planning and firm performance among the motor vehicle assessment firms in Nairobi. The outcome of the study establishes a near perfect positive relationship between operations planning and firm performance with a Coefficient of Multiple Determination (R^2) of 0.877 implying that up to 87.7% of the variation in the firm performance of motor vehicle assessment firms in Nairobi can be attributed to the operations planning practices they have adopted over time. The p-value of 0.001 indicates that the impact of operations planning on firm performance is significant at the 95% confidence level among the motor vehicle assessment firms in Nairobi. The study recommends that local firms implement operation planning to enhance their dynamic capability through operations efficiency. This is further supported by the fact that the study revealed a number of key operations planning drivers which could be making the local firms less competitive. At policy level, there is need for government and other key stakeholders keen on building a viable motor industry to focus on creating impetus to encourage operations planning including operation performance recognition and rewards systems. It is clear that a study of this magnitude should include a survey of sizeable number of firms. However time and material resources did not make this feasible and for this reason the study concentrated on the motor vehicle assessment firms in Nairobi County. Due to the sensitivity of firm performance matters, some of the respondents were non-committal posing major challenge in the field during the data collection. The study recommends further studies involving confirmatory factor analysis to further test the model so established and to confirm the findings of the study. In the same context, there is need for further research to focus on the critical success factors in the adoption of best practices in operations planning.

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ABBREVIATIONS

EAC:	East Africa Community
IRA:	Insurance Regulatory Authority
KNBS:	Kenya National Bureau of Statistics
MAAK:	Motor Assessors Association of Kenya
NTSA:	National Transport Safety Authority
ROA:	Return on Assets
RBV:	Resource Based View
SMEs:	Small and Micro-Enterprises

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The ever-changing world competitive forces have necessitated the need for organizations to employ the strategies of operational planning as a means of realizing timely response to needs of consumers and this has been possible through product innovation and provision of goods and services that are of high quality. In the words of Chermack (2011), he asserts that “Depending with the existing economic climate, a business’s context may change quickly and regularly which result in a need for planning processes which take this new reality and its corresponding complexity and uncertainty into account”. On the other hand, Sarstedf and Melewar (2013) observe that “The operations planning process enhances the chance of making the right decision in the right time frame since it forces the right people to talk about the right areas of focus in a timely manner according to Sheldon”.

Operational strategies adopted by a firm to a large extent determine how the said firm is able to utilize the available resources in order to realize competitive advantage. According to Baumann and Crum (2009), “A business’s operations strategy offers an all-encompassing framework for establishing how a business prioritizes and utilizes its resources to realize a competitive advantage”. To this end, the contemporary business environment provides new challenges to managers in terms of strategy adoption and implementation. Therefore, operational planning makes it possible for business managers to plan and this planning process integrates sourcing, financing, marketing, and sales of goods. Singh (2010) infers that “operational planning is done at least once a month and is reviewed by management at an aggregate -product family level. The process must reconcile all supply, demand, and new product plans at both the detail and

aggregate levels and tie to the business plan” while Prokopets (2012) opines that “The operation planning process connects the strategic plans for the business with its implementation and appraisals performance measurements for incessant development”

This work is based on three models: Resource-based view, Gregory and Platts model, and the model by Lewis and Slack. According to Gregory and Platts in their model developed in 1990, it employs a system which audits the group of goods and services provided by a given company. To this end, the model as provided by Gregory and Platts (1990) observe that an organization audits the products it offers and goes ahead to identify any gaps in the market with an aim of filling the realized gap by offering products and services to that market through sound approaches of operations. By providing goods and services to that particular market, an organization is able to determine the performance of its operations. Accordingly, operational planning is an essential tool that enables companies to fulfill the ever-changing tastes and preferences of customers. According to the resource-based perspective as opined by Paiva (2008) “strategy provides research in operations strategy a more fine-tuned understanding of how competitive advantage is provided through the resources generated by operations”. In the words of Slack and Lewis (2008) as provided in their model, “operations strategy can be observed as the entire outline of choices that profile the long-term competences of any type of operation and their contribution to general strategy, through the reconciliation of operations resources and market requirements”.

The automotive market in Kenya encompasses the supply of vehicles and offering of after sale services coupled with availability of essential spare parts. Kenya’s relatively better infrastructure makes the country a better hub for the assembling of motor vehicles in Eastern Africa. However, the approach adopted by Kenya in the Motor industry is lopsided, which means that regional

countries like Ethiopia are more likely to surpass Kenya because they are more progressive in terms of industrialization. Pillay (2015) observes that the enormous operational drawbacks have weighed down on the capacity of companies specializing in the production of motor vehicles.

1.1.1 Operations Planning

In the words of Stank and Dittmann (2011), “Key strategic decision areas in operations can be fittingly divided into ten categories under two expansive headings: structure (the physical attributes of operations; the hardware) and infrastructure”. On the other hand, Johnson et al. (2005) observe that “operations planning take place at 3 levels in a firm; strategic level, tactical level, and functional level. Strategic level of operations planning involves setting the long-term direction and scope for the whole organization”. Stank and Dittmann go on to assert that corporate level strategy can be adopted by organization if the units of business are more than one unit and that the main function of corporate level strategy is to determine the extent of resource allocation between the aforementioned business units. Prokopets (2012) contend that “corporate level strategy determines the association between the various business units and between the corporate center and on how the business units should be managed. Companies regularly express their strategy in the form of vision statement or corporate mission.

The Tactical level planning encompasses how the difference units of business compete in a given industry, the objectives and strategic aims for such businesses. Based upon the business strategy employed by a particular firm and its association between the business units and corporate centers, the strategy of a business unit may face challenges emanating from the strategic limitation and inadequate resources leveled on it by the center. Singh (2010) suggest that “in single business firms, business level strategy is identical with corporate level strategy. Functional level planning has to do with formulating strategies, which are concerned with how each

function contributes to the business strategy, what their strategic objectives should be and how they should manage their resources in search of those objectives”.

Rae and Roe (2011) point out that “operations planning make the needs of the business strategy specific to the operations function by focusing on the right competitive priorities. Once the competitive priorities have been identified, a plan is developed to support those priorities. The operations strategy will specify the design and use of the organization’s resources; that is, it will set forth specific operations requirements”. Infrastructural and structural operations planning are the two categories, which determine the approach on utilizing firm resources to realize competitive strategy. Structural operations planning in all about formulation of approaches that determine the process of production and this encompasses the attributes of the facilities employed, goods and services flow in the facility, and choosing of the suitable technology. Infrastructural planning encompasses formulation of approaches or decisions based on planning and the control of operation systems and this encompass the competencies and remuneration of employees, quality control decisions, and the arrangement of the operation functions.

1.1.2 Firm Performance

The performance of a given business refers to the completion of given tasks and this should be in line with the prior-set cost, accuracy standards, and speed. In the words of Santos and Brito (2012) “In a contract, performance is deemed to be the fulfillment of an obligation in manner that releases the performer from all liabilities under the contract”. Essentially, performance can be said to be the accomplishment of activities over a given period of time.

Illmer (2013) observe that “Firm performance is a subset of organizational effectiveness that covers operational and financial outcomes” while Mitchel and Rowley (2013) suggest that “Superior financial performance is a way to satisfy investors and can be represented by

profitability, growth and market value. These three aspects complement each other. Profitability measures a firm's past ability to generate returns. Growth demonstrates a firm's past ability to increase its size". On the other hand, Stank and Autry (2012) contend that "Raising size, even at the same profitability level, will increase its absolute profit and cash generation. Larger size also can bring economies of scale and market power, leading to enhanced future profitability. Market value represents the external assessment and expectation of firms' future performance". It is imperative to note that there should be a relationship with levels of growth and historical profitability and this should integrate expectations of the future changes in the market and competitive moves.

Stank and Autry (2012) point out that "Organizational performance can be gauged by applying financial and no-financial parameters. A performance measure is composed of a number and a unit of measure. The number gives us a magnitude (how much) and the unit gives the number a meaning (what)". It is worthy to note that measures of firm performance are knotted to a given aim or goal. Single dimensional units represent measures of performance and the said dimensional units comprises of dollars, number of errors, hours, nanoseconds, and number of reports. According to Carton and Hofer (2009), "over and over again, multidimensional units of measure are applied. These are measures of performance expressed as ratios of two or more fundamental units. These may be units like miles per gallon, number of accidents per million hours worked, or number of on-time vendor deliveries per total number of vendor deliveries".

1.1.3 Operations Planning and Firm Performance

Scott (2015) observes that "operation planning is one capability that managers can develop to improve company performance and to cope with a dynamic marketplace in which the behavior of customers, suppliers and competitor are different to predict". On the other hand, Stank and

Autry (2012) suggests that operational planning is one of the most essential factors that determine the competitive advantage of firms. Mitchelmore and Rowly (2013) point out that performance of firms can be said to be an independent or dependent variable and this hinges on the viewpoint given to the issue.

According to Zahra and Das (1993), “A well-articulated resource-based operations strategy should capitalize on a business's operations resources to augment firm performance. This can be attained by raising the exclusivity or decreasing the substitutability of various resources required for the strategy”. Similarly, Cohen and Levinthal (1990), and Barney (1991) points out that organizations ought to utilize their resource capabilities as an approach to realizing competitiveness. From a strategic management perspective, and drawing on the key tenets of the resource based theory, companies can realize competitive advantage by enhancing their resources of internal operations and this encompasses application of information technology and the roles of employees.

Zahara and George (2002) point out a 3-fold perspective, which comprises of the process of management, competitiveness potential, and performance competitiveness. Zahara and George go on to assert that competitiveness encompasses the integration of processes and assets, in which case the assets comprise of the infrastructure and natural resources while processes comprises of the formulated steps undertaken to transform the assets to finished products as demanded by customers. Zajac (2004) observes that results can be realized through competitive potential and this is possible through the process of competitiveness, which is similar to Asset-Process- Performance framework.

1.1.4 The Motor Assessment Industry in Kenya

Over the last five years, the automobile industry in Kenya has been facing endemic challenges despite the country's improved economy. Some of the challenges that have slowed the growth of the automobile sector include but not limited the unpredictable post-election climate and the move by the government to reduce the purchase of new vehicles and increased interest rates (Miriam, 2015)

The National Transport Safety Authority under its department of Motor Vehicle Inspection unit conducts inspection of vehicles and this function is delegated to it by the law. According to the chapter 104 of the traffic act, the Motor Vehicle Inspection unit has a responsibility of conducting routine inspection of vehicles with an aim of ensuring that the vehicles operating on the Kenya roads are safe. Therefore, the role of Motor Vehicle Inspection unit is to reduce the loss of lives through road accidents. The key clientele for the assessment of vehicles comprises of the government institutions, financial institutions, insurance industry, and corporate customers. It is imperative to note that it is not only National Transport Safety Authority that has the responsibility of vehicle assessment, as other privately licensed institutions also conduct vehicle inspections. The Insurance Regulatory Authority (IRA) is mandated by law to develop, supervise, and regulate the insurance in the country.

According to Insurance Regulatory Authority (2015), there are 101 licensed insurance motor vehicle assessors in the country.

Key regulatory issues with regards to motor vehicle assessment in Kenya span across the mandate of IRA and NTSA. The Insurance Act, has been an efficient tool, with the responsibility

of controlling the insurance sector but over time has become a less than ideal piece of legislation and tool for responding to the changing insurance environment. Consequently, The Act has been amended substantially over its twenty nine (29) year life but on the basis of the piecemeal that has not been adequate to update its application to the appropriate level. In this regard, regulatory issues have arisen with the demarcation of the mandate of the NTSA and IRA particularly with regards to motor vehicle assessment. Some of the regulatory issues include: the fact that the modernization of the current legislation in accordance with contemporary drafting principles to ensure that the provisions are in simple language, concepts are easily understandable by stakeholders and it is drafted in a positive style; and the fact that the legislation is based on the Insurance Core Principles as formulated by the International Association of Insurance Supervisors and international best practice hence not contextual to the Kenyan scenario (MAAK, 2015).

1.2 Research Problem

Swamidass and Newell (2009) point out that operations planning allows for the efficient application of manufacturing strengths as a competitive approach for the realization of corporate and business objectives. According to Skinner (1969) operations planning comprises of the strategies and goals of an organization, which makes it possible for the operations functions to add to enhanced firm performance and competitiveness. In the backdrop of a slump in the Kenya's motor vehicle assessment industry over the recent past, the need for studies to investigate how operations planning can be applied as a capability that managers can develop to improve company performance and cope with a dynamic marketplace cannot be understated.

Earlier studies such as the ones conducted by Santos and Brito (2012), Chermack (2011), Stank and Autry (2012), and Scott (2015) have studied the effects of operational strategic planning on

the firm performance, and the connections between precise operations resources (such as workforce and supplier relationships) and competitive priorities very few have tried to investigate all the connections in a methodical and practical approach. Empirical studies exploring operations strategies have not received significant attention from operations management researchers particularly in Sub-Saharan Africa. Most studies suggest that operations management researchers ought to emphasis on companies that offer services as an approach to elucidating the precise problems posed by the distinctive features of services (Badiri et al., 2009; Lewis & Boyer, 2010; Beal & Yasai, 2012). Additionally, in the service sector, the economically significant and socially important motor assessment sector has been abandoned (Swamidass & Newell, 2009).

Locally, Wang'ondu (2015) conducted a descriptive survey on renewing operations strategy in Kenya's motor industry and found that the declining performance of most motor companies is due to poor operations strategy. Her study is however limited to the extent that, she looks at operations strategy from the marketing perspective alone, hence the current study. Mohamed (2007) conducted a study on the Responses of Trans Africa Motors to the drawbacks associated with the environment in the automobile sector in the country and identified some of the strategies adopted by the firm including; cost leadership, product differentiation, segmentation, penetration and development of new markets. The study however falls short of determining the link between the various strategies and firm performance. In a study conducted by Kipkosgei (2012) on the Influence of strategic marketing practices vis-a-vis the performance of motor companies in Kenya and established that employee turnover was hindering strategic marketing practices in their companies to a moderate extent. While his study provides vital insights on the role of operations planning, it is biased towards strategic marketing strategy.

In sum, earlier studies tend to hinge on strategies of operations and incorporated samples from various manufacturing firms. Service industries perform a progressively essential part in the Kenya's overall economy and as such, the need for research in this area is of paramount importance. For years there have been some calls for an in-depth study of the state of affairs of service operations research, to enhance strategic thinking in services. Not many studies have paid much attention to the motor assessment sector, particularly in emerging economies such as Kenya. The rising competition emanating from economic and market reforms necessitates that firms in developing countries like Kenya should formulate, understand, and implement effective and efficient operational strategies, which impact on their performance.

Arguing from a resource-based perspective, this research developed an integrative and systematic framework for investigating the links between operational planning, business setting, operations resources, and performance of companies in Kenya's motor vehicle assessment sector. To this end, this study sought to establish the influence of operational planning on the performance of motor vehicle assessment firms in Nairobi.

1.3 Research Objectives

1.3.1 General objective

The study sought to establish the association between operations planning and the firm performance of motor vehicle assessment companies in Nairobi, Kenya.

1.3.2 Specific Objectives

The specific objectives of the study were to:

- i. Identify the various operations planning practices adopted by motor vehicle assessment firms in Nairobi; and

- ii. Establish the association between operations planning practices and firm performance among motor vehicle assessment firms in Nairobi.

1.4 Value of the Study

On a theoretical level, this work endeavors to make an original contribution to the prevailing knowledge body on operations planning by exploring the links among operations strategy, setting of a business, operations resources and performance of businesses. In particular, this research will contribute to the operations strategy field by exploring the importance of managing the roles of operations resources and market environment.

On the managerial level, the findings of the study will enable operations managers appreciate the roles that business environment and operations resources perform in formulating a firm's operations strategy and improving company performance, and how firm managers in Kenya can develop operations strategy as a means of remaining profitable and remain afloat in the ever-changing and competitive motor assessment industry.

On the policy level, the research findings will provide vital insights to policy makers at the national level on enhancing the competitiveness of motor vehicle assessment firms in the local and international market. Given the centrality of entrepreneurship in Kenya's vision 2030, the study will provide backstopping to consultants, line ministries and allied state organs in formulating a robust SMEs strategy with regards to their performance in the motor vehicle assessment sector in Kenya.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter, relevant theories and literature are reviewed on operations planning and firm performance. The chapter focuses on; the theoretical framework, operations planning, firm performance, empirical literature, conceptual framework that demonstrates the relationship between variables, and finally the summary of the reviewed empirical literature.

2.2 Theoretical Framework

The theoretical framework of the study presents Platts and Gregory theory, Slack and Lewis model, and the Resource-Based View to explain the strategic implications of operations planning on performance.

2.2.1 Platts and Gregory Theory

From a market-led perspective of operations planning, the key tenets of the Platts and Gregory theory presents an approach that seeks to audit products that a particular organization is offering in the market. The theory stipulates that the main aim of auditing products is to establish any existing gaps regarding what the market requires and how well a firm's operational performance endeavors to ensure the availability of the said services or products. The availability of a certain product is determined wholly through many factors, which establish its requirements in the marketplace. Such factors include quality, reliability, and cost. Accordingly, an assessment is undertaken between the competitive factors and an organization's operational performance, which then makes it possible to come up with a strategy on operations that will align performance with the expectations of the clients (Stank & Dittmann, 2011).

The theory is relevant to the current study since it outlines how the operations planning among the motor vehicle assessment firms in Nairobi can be developed in response to the dynamic marketplace in which the firms carry out their businesses. The theory corroborates with the writings of Hill (1985) who asserts, “an organization’s operations strategy should be linked to its marketing strategy by considering how its products and services win orders in the market place. It is possible to identify two types of competitive criteria in any market. Market qualifying criteria are those factors that must be satisfied before customers will consider making a purchase in the first place. Order winning criteria, on the other hand, are the factors on which customers ultimately make their purchasing decision”.

2.2.2 Slack and Lewis Model

The theory advanced by Slack and Lewis in the year 2008 develops the objectives of performance to be speed, cost, flexibility, quality, and dependability. It is imperative to note that the objectives of performance offer illustrations concerning what constitutes the competitiveness of a firm. As a competitive variable, speed involves offering goods or services within the timeline stipulated by the client whereas cost involves the establishment of a market price, which will define competitiveness while at the same ensuring realization of revenue. Similarly, flexibility as an objective of performance allows organizations to overhaul the routine way of operations as a responsive technique to the changing tastes and preferences of the customers. On the other hand, quality enables firms to produce goods in line with established goals as a means of guaranteeing minimization of errors. Moreover, dependability aims to establish a sense of commitment within an organization by delivering goods and services to the clients within the timespan agreed.

The theory fits into the current study since it clearly links operations planning to performance and thus will help outline how motor vehicle assessment firms in Kenya can enhance their performance. For instance, if an organization aims to put in place a strategy that offers lower prices in the market, then its operations should involve lowered cost of operation. Moreover, if an organization endeavors to provide timely deliveries to the customers, then its operations must strive to establish speedy operations, which will be in line with the anticipations of the customers (Singh, 2010).

2.2.3 Resource-Based View Theory

Barney (1981) and Wernerfelt (1984) postulated the resource-based view model, which infers that the higher performance of a firm emanates from the acquisition, development, and deployment of resource as a means of building its capability. In its view, the theory puts less emphasis on the positioning of a firm in the market to enhance its performance index. As such, the operations capability of an organization should be understood for analysis of its future trends. The existing capabilities of a firm are important during decision-making concerning the kind of profitable markets to invest in given the fact that they are able to leverage on the vulnerability of other competitors.

According to the resource-based view, companies with superior performance must have acquired their competitiveness from the resources that they hold within their internal operations. Therefore, the successful nature of an organization is pegged highly on its capability of strategically developing or acquiring resources for operation purposes. Moreover, it is important to note that firms are able to receive greater returns from the resources that they possess unlike from their apparent positioning in the market. As such, the strategy on operations is well

grounded on organizations establishing resources for operations, a component, which usually developed. The resource-based view is useful in this study because it offers insight to the best practices of enhancing organizational performance through development of operations resources. The existing resources are analyzed in light of overseeing the various undertakings of a company within a specified time.

According to the theory, there are six types of resources, which firms are able to utilize fully as a means of improving their performance and competitiveness. The resources encompass resources that are tangible, and others that comprise of experience and skills. Other categories of resources within an organization comprise of values and culture, change resources, network, procedure and systems resources. The above-mentioned resources undergo an evaluation criteria, which incorporates versatility, sustainability, and value. The category of resources that are able to tally high are regarded to be crucial. Therefore, such resources are said to defining the competitiveness of a firm (Mills et al., 2002).

2.3 Operations Planning

According to Stank and Dittmann (2011), an operation planning is a formal process instituted by organizations in an attempt to balance customer demand with product supply. In the words of Stahl (2010), operations planning “is a process carried out by what can best be described as a cross-functional planning team comprised of mid-level managers and analysts”. The assertions of Stahl (2010) are in agreement with the arguments advanced by Mintzberg & Waters (1985) who see a strategy to be encompassing many patterns that require collective action for the accomplishment of organizational goals and objectives. Therefore, when various actions are pooled together, whether emergent or deliberate within an organization, they lead to a strategy,

which is imperative in enhancing performance and competitiveness. Equally, it is worth noting that companies can develop many methods of achieving goals and objectives. Nonetheless, in most occasions, only a few strategies may be realized in the end. Most of the strategies may be ambiguous such that they are completely unattainable because they do not consider the feasibility of the operations of the organization.

The concept of operations planning can be applied selectively depending on the strategic objectivity of an organization, that is, it can be applied from the top to the bottom or vice versa. On the same note, it is of equal importance to note that firms can develop strategies on operations to address some issues regarding what the market entails. Accordingly, operations strategy is developed because of many factors, which lead four orientations of operations planning (Slack & Lewis, 2002).

According to Leong et al. (1990), “the major strategic decision areas in operations can be conveniently divided into ten categories under two broad headings: structure- the physical attributes of operations; the hardware and infrastructure - the people and systems of operations; the software. The structural decision areas comprise Facilities- the location, size and focus of operational resources. These decisions are concerned with where to locate production facilities, how large each facility should be, what goods or services should be produced at each location, what markets each facility should serve, Capacity - the capacity of operations and their ability to respond to changes in customer demand”. Furthermore, Sartedf & Melewar (2013) point out that, “Structural decisions often involve major capital investment decisions, which once made will set the direction of operations for many years to come. On the other hand, infrastructural planning

has to do with decisions related to the planning and control systems of the operation, such as the organization of the operations function, the skills and pay of workers, and quality control approaches". The processes of production through their infrastructure and structure define the operation variables of an organization.

2.4 Performance Measurement

Measurement of performance is significant within an organization that seeks to achieve its goals and objectives. The process allows firms to keep abreast of essential parts of their systems and programs. Performance measurement allows organizations to collect important data, which ultimately provides the needed guidelines on the best practices of decision-making. Performance of any organization is done comparatively with the set objectives or goals, which managers are able to draw results from and establish the areas that can be assigned resources to increase their performance. The primary purpose for initiating management of performance involves alignment of the many components of an organization with an aim of ensuring attainment of goals, which subsequently lead to enhanced organizational performance.

Firms are able to develop measures of performance that usually underscore the interrelated subsystems and their contribution to the achievement of organizational goals. In light of that, there exist four distinct measures of performance. The first fundamental performance measure is process measure that gives the quantity of services provided depending on the existing facts. On the other hand, balance measure is another formidable aspect of performance that purposes to establish stability in an organization more particularly when a change is being undertaken in among the subsystem. Similarly, another essential measure of performance is structure, which deals with quantification of organizational features.

According to McGee (2011) a performance measurement is “the integrated set of management processes which link strategy to execution”. Further, he points out that “the components of a strategic performance measurement system are: performance metrics which define evaluation criteria and corresponding measures that will operate as leading indicators of performance against strategic goals and initiatives. Similarly, management process alignment which has to do with designing and reengineering core management processes to incorporate new performance metrics as they evolve, and balancing the various management processes of the organization so that they reinforce one another; and a measurement and reporting infrastructure which consist of establishing processes and supporting technology infrastructures to collect the raw data needed”.

2.5 Approaches to Performance Measurement

There exists one fundamental standpoint of strategic planning through which organizations measure their performance. Holistically, the incorporation of the stakeholders by senior managers in contractual negotiations, forms part of the broader approach of measuring performance, which is underscored through the scope or nature of such contracts. Gregory (2014) postulates that the “performance measurement system is the tool the company uses to monitor those contractual relationships”.

2.5.1 The Balanced Scorecard

Mitchelmore & Rowley (2013) contend that the “balanced scorecard is a management framework which, since its inception by Kaplan and Norton in the early 1990s, has been adopted, modified and applied by hundreds of organizations worldwide. If understood thoroughly and implemented appropriately, its potential contribution to organizational success – however measured – is fundamental. The scorecard translates vision and strategy into four notional quadrants. The BSC model is based on the following four perspectives and implications of the

strategy: Financial; Customer; Internal business processes; and Organizational learning and growth”.

On top of that, Sarterdf & Melewar (2013) argue that the “key to the popularity of the scorecard may lie in its flexibility and adaptability. Whether for commercial organizations, governed by profits, public sector operations governed by service delivery, or not-for-profit organizations driven by commitment to a particular cause, a scorecard that improves performance (either through performance measurement, or via strategy refinement), can be developed. Second-generation scorecards allow individuals and teams to define what they must do well to contribute to higher-level goals”. Further, the authors found out that they are frequently used in manufacturing and healthcare organizations, especially those that have been implementing total quality management programmes (TQM, Malcolm Baldrige award initiatives), which generate many measures to monitor processes and progress. Such stakeholder scorecards were criticized by some, as being little more than an extended list of key performance indicators (KPIs). With the introduction of causality into the design of the scorecard, organizations are able to utilize the scorecard as a management tool, which possesses strategic significance.

2.5.2 Six Sigma

Six sigma attempts to offer a strategic framework through which organizations are able to identify and eliminate problems while at the same time endeavoring to minimize varying outputs. The approach involves collection of data that is measured statistically to establish variations. The six-sigma model aims to analyze and establish the degree of deviation in processes from a given perfect point.

Gregory (2014) asserts, “The central idea behind Six Sigma is that if you can measure how many ‘defects’ you have in a process, you can systematically figure out how to eliminate them and get as close to ‘zero defects’ as possible. To achieve Six Sigma quality, a process must produce no more than 3.4 defects per million opportunities”. In addition, Gregory (2014) defines an ‘opportunity’ as “a chance for nonconformance, or not meeting the required specifications. This means we need to be nearly flawless in executing our key processes”.

At its core, Six Sigma revolves around the following key concepts, critical to Quality which involves attributes most important to the customer; Defect which has to do with failing to deliver what the customer wants; Process Capability - What your process can deliver; Variation: What the customer sees and feels; Stable Operations- Ensuring consistent, predictable processes to improve what the customer sees and feels; and Design for Six Sigma - Designing to meet customer needs and process capability. Defect as defined by Mitchelmore & Rowley (2013) refers to “any process output that does not meet the customer’s specifications”. On the other hand, improving quality means reducing the defects per million opportunities. Sarterd & Melewar (2013) argue that “There are two attributes to this metric that can be controlled: Opportunities – reducing the number of steps, handoffs and other “opportunities” will help improve quality; Defects – reducing the number of defects for each process step through continuous process improvement will help improve quality”.

2.5.3 Bench marking

In the words of Suklev and Debarliev (2012), bench marking encompasses the progressive assessment of the best practices as a means of ensuring that companies are able to adopt policies that enable them to remain competitive. To this end, bench marking makes it possible for organizations to produce the appropriate products for market hence superior performance in the

market. According to Gregory (2014), bench marking is the process of juxtaposing the products offered by a company with respect to other companies and this is done with an aim of implementing the right practices as a means of remaining the best in the market.

Aldehayyat and Twaissi (2011) observe that “benchmarking comprises of assessing the other organizations’ business processes and implementing them to integrate best practices as a means of improving performance, search for innovative ideas, and gain a competitive advantage”. The tenets of benchmarking were realized by the corporate world in the 1970s and during its earlier days, it was employed as a means of enhancing the quality of products manufactured by companies. In the contemporary world, the tenets of benchmarking have been used in departments such as staff and customer service departments. For instance, during the 1980s, most of the companies offering services started looking for data in relation to how companies offering the same services were operating. Gică, and Balint, (2012) observe that in the modern day economy, more and more organizations are undertaking benchmarking beyond the industries they operate in and on functions which are similar or relevant to their circumstances sometimes extending to customers and vendors..

2.5 Summary of Empirical Studies

Table 2.1: Summary of Empirical Studies

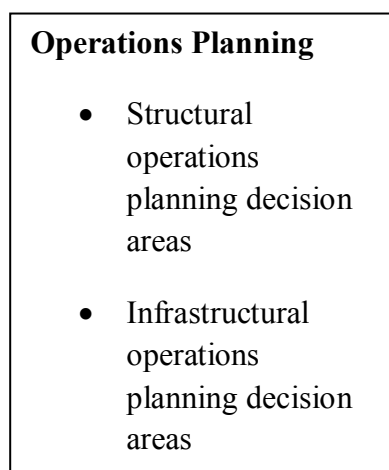
Author	Objectives	Findings	Gap
Aldehayyat, J.S & Twaissi, N. (2011)	To determine the connection between and corporate performance strategic planning	has proven that the association between performance of firms and strategic planning is positive and significant in the Middle East context	The study was contextualized to the Middle East. hence, findings of the study cannot be generalized across different nations
Schwenk, C.R & Shrader, C.B. (1993)	To unravel the role of operations planning in enhancing performance of firms	The study found that, there were positive relationship between strategic planning and firm performance.	The study is limited to the extent that, there is no clear distinction between strategic and operations planning.
Mitchelmore, S. & Rowley, J. (2013)	To investigate the antecedents of successful strategic planning	Firms need to lengthen their time horizon of strategic planning as a means of gaining better performance.	The study is limited to the extent that it only factored one aspect of operations planning.
Wan'gondou, M. (2015)	To determine how operations planning impacts on successful operations strategy	The poor performance of firms in the motor industry is attributed to poor operations strategy	The study only views operations planning from the marketing perspective
Mohamed, S. (2007)	To identify the various strategies Transafarica motors has adopted to mitigate the impact of environmental changes.	The firm has adopted cost leadership, product differentiation, segmentation, penetration and development of new markets.	The study falls short of determining the link between the various operations planning practices and organizational performance
Nixon, O. (2013)	To establish the influence of operations strategy on firm performance	Motor vehicle assemblers are facing stiff competition which has made them adopt some operations strategies to remain competitive in the market.	The study focused on motor vehicle assemblers, hence the findings of the study may not be applicable in motor vehicle assessing industry

2.6 Conceptual Framework

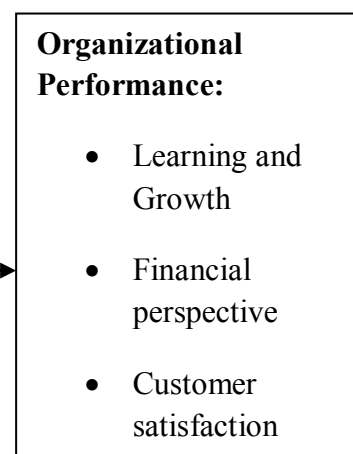
In this study the dependent variable was the performance of the motor vehicle assessment firms. The independent variables in this case included: the structural operations planning decision areas and infrastructural operations decision areas.

Figure 2.1: Conceptual framework

Dependent Variables



Independent Variable



Source: Own compilation (2016).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section described the design of the research, sample design, target population, methods of data collection, and analysis of data.

3.2 Research Design

A descriptive survey design was employed in this study. The researcher chose a descriptive survey design because it made it possible to collect data from a sample population in an efficient, economic, and effective way. According to Saunders et al. (2002), the use of the descriptive survey design makes it possible for a researcher to obtain data that are quantitative, which the researcher can analyse through the use of inferential and descriptive statistics.

3.3 Population of the Study

According to Mugenda and Mugenda (2009), a target population refers to all the individuals whom the researcher endeavours to gather data from and this is normally within the site of study. The population of interest in this research comprised all the 101 motor vehicle assessment firms in Nairobi. One hundred and one motor vehicle assessment firms were on the roll according to the Insurance Regulatory Authority data base (IRA, 2016).

3.4 Sampling frame & Sample size

A census approach was applied in the study in which case, the sampling frame consisted of all the motor vehicle assessment firms. According to Saunders, Lewis and Thornhill (2009), “a census approach enhances validity of the collected data by including certain information-rich cases for study”.

3.5 Data Collection

The study utilized secondary and primary data. Primary data was gathered using a semi-structured questionnaire subdivided into three sections. Section 1 consisted of questions aimed at obtaining demographic data of the respondents. Section 2 consisted of questions aimed at obtaining data on the operations planning processes of the firms while section 3 consisted of questions aimed at establishing the relationship between operations planning and the firm performance.

Secondary data on firm performance of the respective firms was acquired from the annual financial reports under the period of study. The data were extracted from sources such as statement of income, financial position statements, and notes to the accounts. The researcher adopted secondary data analysis because it saves time, which the research would use to collect data. Moreover, secondary data offers greater and bigger databases, which the researchers maybe unable to collect individually. When analyzing the changes in economic and social spheres, the use of secondary sources of data makes it possible for the researcher to collect past and present data.

A 5-point Likert scale was adopted to gauge the response of each item responded to by the participants. According to Mogey (2007) the justification for the use of the Likert scale was based on the fact that it is easy and cost-effective to use and score; its straightforwardly applicable to most attitude measurement circumstances and offers straight and dependable evaluation of perception, and the fact that the Likert scale lends itself well to item analysis procedures.

3.6 Data Analysis

The quantitative data collected were coded on statistical Packages for Social Sciences version 21.0 software and data were analyzed by use of descriptive and inferential statistics. Descriptive analysis encompassed use of standard deviations and means while inferential analysis involved use of multiple regression and correlation analysis. Data presentation was in form of tables (Cooper & Schindler, 2006).

Correlation analysis was done to establish the degree or extent of association between the variables, correlation analyses is the statistical application, which can be applied to establish the extent of relationship of two variables. Correlation analysis helps to notice any chance of multicollinearity among the variables of the study. Correlation value of 0 point out that there is no relationship between the dependent and the independent variables. Conversely, a correlation of ± 1.0 implies that there is a perfect positive or negative association. The values were be interpreted between 0, which means no relationship and 1.0, which means perfect relationship.

A multivariate regression model was used to establish the relative significance of each of the four study variables. This is an endeavor to determine the degree to which the independent variables influence the dependent variables as exhibited by the size of the beta coefficients.

The multiple regression model was computed as follows;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2$$

Where;

Y = Firm Performance (Customer satisfaction)

β_0 = Constant

β_1, β_2 = Coefficients of determination

X₁ = Structural Decision areas

X₂ = Infrastructural Decision areas

3.7 Summary of Data analysis Methods

Objective	Section of the Questionnaire	Data Analysis Method
i. To identify the various operations planning practices adopted by motor vehicle assessing firms in Nairobi;	Section 1 and 2	Descriptive statistics: Frequency, Mean, Variance, and the Standard deviation
ii. To establish the relationship between operations planning practices and firm performance among motor vehicle assessing firms in Nairobi.	Section 3	Multiple regression and Correlation Analysis

Source: Own Compilation (2016).

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

The study sought to determine the influence of operations planning on the performance of motor vehicle assessment firms in Nairobi. This section captures the findings of the study by focusing on the demographic characteristics of the respondents, data analysis and suggestions by the respondents pegged on the study's specific objectives. Data on sustainable operations planning and firm performance were analysed using descriptive and inferential statistics.

One hundred and one (101) questionnaires were administered to motor vehicle assessment firms in Nairobi. Seventy-one (71) of these questionnaires were returned and this represented a 70.3 per cent response rate. This response rate was considered to be sufficient and representative and this is in line with Mugenda and Mugenda (2003) who observes that a 50% response rate is enough to guarantee reporting and analysis whereas a rate of 60% is good and a response rate of 70% and above is excellent.

4.2 Demographic Information

The respondents' demographic characteristics, which were tested comprised of the job position and working experience. Operation planning involves managers spanning all the functional areas of an organization. Cognizant of the above, an inquiry was made into the job positions of the respondents. Most of the respondents (87.3%) were operations managers. Managing Director and Principal Officer follow at 70% and 56% respectively. This implies the information was collected from respondents who are directly involved in making key operations decisions thus were better placed and aware of the operations planning approaches adopted by their firms.

The working experience of the workforce positively correlates with firm performance given the fact that the members of an organization have significant information on a firm's overall operations strategy. In this context, the research endeavoured to establish the total years the various research participants had been in their current positions among the motor vehicle assessment firms. 78.9% of the research participants had over eleven years of working experience with those with 6-10 years working experience constituting 12.7% of the respondents. On the other hand, only 8.5% of the respondents have less 5years experience as employees. This clearly implies information collected was from employees who have massive experience and familiarity with operations planning in the respective firms.

4.3 Drivers of Operations planning

Operation planning is one capability that managers can develop to improve company performance and to handle the ever-changing marketplace in which the behavior of clients, suppliers and competitor are different to predict. Towards this end, an inquiry was made into the main factors that have driven motor vehicle assessment firms in Nairobi to adopt various operations planning practices. The respondents were asked questions on the degree to which various factors have driven their respective firms into adopting operations planning practices on a Likert scale of 1-5. The results are depicted in table 4.1.

Table 4.1 Drivers of Operations Planning

	Mean	Standard Deviation
	Statistic	Statistic
The firm has adopted operations planning practices to build its core competency.	4.4930	.82589
The firm has adopted operations planning practices to respond to investor's pressure.	3.8732	1.04101
The firm has adopted operations planning practices to reduce productions costs	3.7746	1.05826
The firm has adopted operations planning practices to meet clients' expectations.	3.6197	1.51531
The firm has adopted operations planning practices as a strategy to utilize new market opportunities	3.3662	.83220

Source: Researcher (2016).

According to the findings in table 4.1, the adoption of operations planning practices to build a firm's core competency is the most influential driver of operations planning with a mean of 4.49 implying that many of the respondents generally approved on the role of this variable in compelling the motor assessment firms to adopt operations planning practices. Other key drivers of operations planning include: The adoption of operations planning practices to respond to investors' pressure; the adoption of operations planning practices to reduce production costs; the adoption of operations planning practices to meet client expectations; and the adoption of operations planning practices as a strategy to utilize new market opportunities at 3.8732, 3.7746, 3.6197, and 3.3662 respectively.

The findings above corroborates Chermack (2011) who asserts that "consistent with the current economic climate, a company's context may change rapidly and frequently which result in a need for planning processes which take this new reality and its corresponding complexity and uncertainty into account".

The findings of the study concur with Aldehayyat and Twaissi (2011) who observes that “operations planning might come about in a top-down or bottom-up process with regard to corporate and business strategies. Likewise, an operations approach might be formulated in response to market requirements or be pegged on the capacities of its operations resources”.

4.4 Operations Planning Practices

The first objective of the research was to identify the various operations planning practices adopted by motor vehicle assessment firms in Nairobi. Operations planning practices were categorized into the following main streams: structural decision areas; and infrastructural decision areas. The respondents were asked questions on the extent to which their companies have adopted various operations planning practices on a Likert scale of 1-5. In the initial step, a correlation matrix was generated to identify any significant relation between the items then descriptive statistics were used to determine the variance of the operations planning practices.

4.4.1 Structural Decision Areas

The structural decision areas included: the location of the facilities, size and focus of operational resources. Cognizant of the above, the study sought to investigate the extent to which various structural decision areas have been adopted by motor vehicle assessment firms in Nairobi. The outcomes are presented in table 4.2.

Table 4.2 Structural Decision Areas.

	Mean	Std. Deviation
	Statistic	Statistic
The firm makes its operation decisions based on its facility endowment to enhance its performance	3.7324	1.47317
The firm makes its operation decisions on the location of its service facilities based on the type of market	3.6479	1.26602
The firm makes its operation decisions on capacity in response to customer demands	3.3380	.89353

Source: Researcher (2016).

From the findings in table 4.2, the fact that the firm makes its operation decisions based on its facility endowment to enhance its performance; and that the firm makes its operation decisions on the location of its service facilities based on the type of market constitute the main structural decision areas that have been adopted by the motor vehicle assessment firms to a large extent with a mean of 3.7324 and 3.6479 respectively. According to the findings, the making of operation decisions on capacity in response to customer demands has been adopted to the least extent with the lowest a mean at 3.338 implying that the practice has been adopted to a moderate extent. On Structural Decision areas the findings of this study are in tandem with Sarterdf and Melewar (2013) who observe that infrastructural planning comprises of the formulation of the approaches that encompass control and planning systems of organizational operations.

4.4.2 Infrastructural Decision Areas

Infrastructural planning has to do with choices connected to the planning and control systems of the operation and this include the organization of the operations function, the remuneration and competencies of the employees, and the approaches of quality control. Towards this end, an inquiry was made into the degree to which motor vehicle assessment firms in Nairobi have

applied operations planning practices under infrastructural decision areas. The results are presented in table 4.3.

Table 4.3 Infrastructural Decision Areas

	Mean	Std. Deviation
	Statistic	Statistic
The firm has put in place systems for planning and controlling of operations to enhance its performance	3.6197	.49633
The firm has established a Quality management policy aimed at ensuring continuous improvement	3.6761	.63355
The firm has an established sound work –organizational structures that clearly demarcates responsibilities and accountability in operations	3.7042	.80705
The firm has put in place strategic human resource management mechanisms that support proper training and development to enhance productivity	2.6901	.83015
The firm has adopted a sound governance and management style to enhance employee-organizational commitment	3.7746	.68533
The firm has put in place a performance measurement system that focuses on non-financial and financial performance measures	3.5070	.19402
The firm has established mechanisms that link performance measures to recognition and reward systems	1.4930	1.2340

Source: Researcher (2016).

As per the results in table 4.3, the fact that the firm has adopted a sound governance and management style to enhance employee-organizational commitment is the most influential operations planning practice associated with infrastructural decision areas that has been adopted by the motor vehicle assessment firms in Nairobi with the highest mean at 3.7746 indicating that the practice has been adopted to a large extent. The firm has an established sound work – organizational structures that clearly demarcates responsibilities and accountability in operations; The firm has established a Quality management policy aimed at ensuring continuous improvement; and The firm has put in place systems for planning and controlling of operations to enhance its performance follow in that order with a mean of 3.7042, 3.6761 and 3.6197

implying that they have been adopted to a large extent among the motor vehicle assessing firms in Nairobi. On the other hand, the fact that the firm has put in place strategic human resource management mechanisms that support proper training and development to enhance productivity; and the establishment of mechanisms that link performance measures to recognition and reward systems have been adopted a small extent with a mean of 2.6901 and 1.4930 concurrently.

With regards to infrastructural decision Areas, the study complements Stahl (2010) who argues that; infrastructural planning has to do with choices connected to the planning and control systems of the operation and this include the organization of the operations function, the remuneration and competencies of the employees, and the approaches of quality control. To this end, the main strategic decision areas in operations can be categorized into ten groups under two broad headings: structure- the physical attributes of operations; the infrastructure and hardware - the individuals and systems of operations.

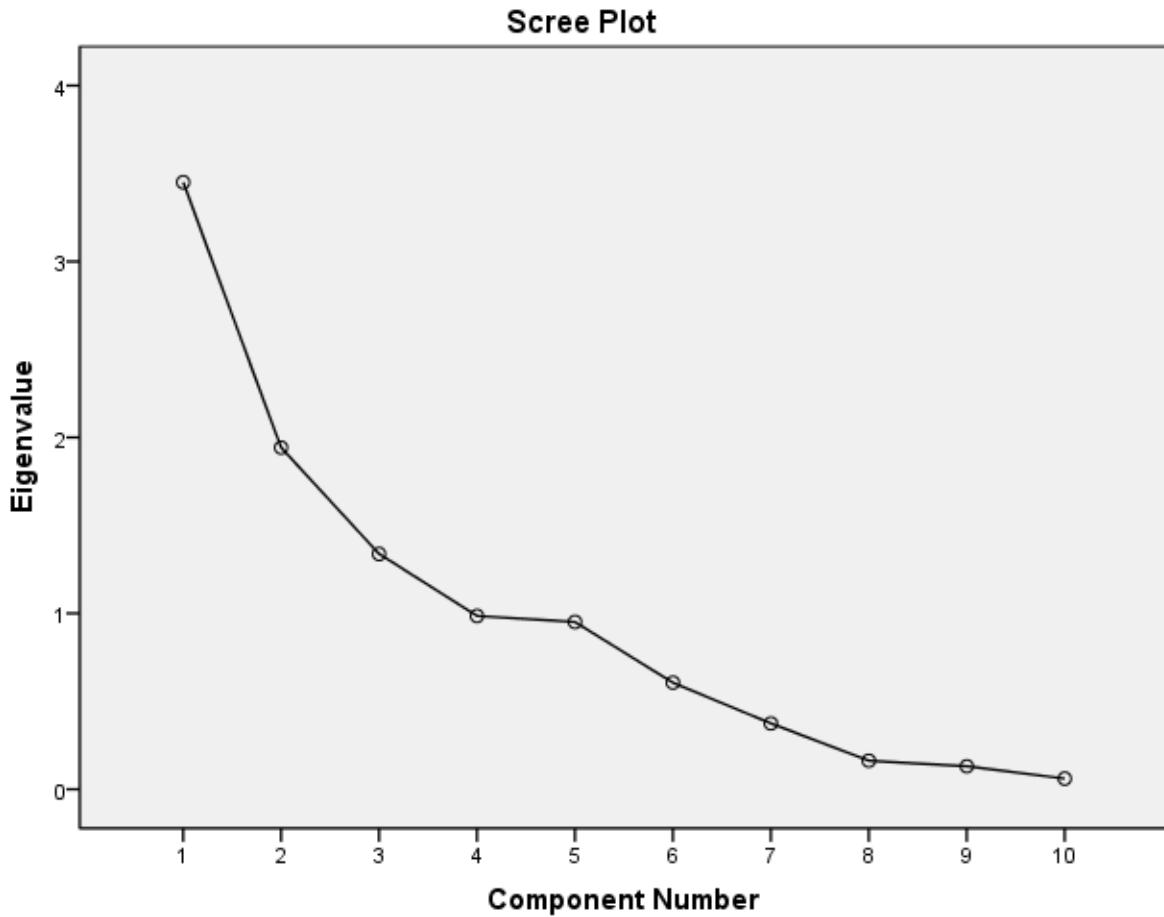
For easy analyzability, factor analysis was applied to reduce the operations planning practices. The operations planning practices were reduced by Principal Component Analysis from ten to five key operations planning practices which account for 86.664% of the variance in the firm performance of the motor vehicle assessment firms in Nairobi. The results are shown in Table 4.4.

Table 4.4 Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.451	34.506	34.506	3.451	34.506	34.506	2.419	24.187	24.187
2	1.942	19.420	53.926	1.942	19.420	53.926	1.901	19.011	43.198
3	1.338	13.376	67.302	1.338	13.376	67.302	1.880	18.798	61.996
4	.985	9.854	77.156	.985	9.854	77.156	1.282	12.824	74.820
5	.951	9.508	86.664	.951	9.508	86.664	1.184	11.844	86.664
6	.606	6.059	92.723						
7	.374	3.743	96.466						
8	.162	1.623	98.089						
9	.131	1.308	99.397						
10	.060	.603	100.000						

Extraction Method: Principal Component Analysis.

Source: Researcher (2016).



The results in Table 4.4 indicate that, five operations planning practices account for up to 86.664% of the total standard variances implying that the five operations planning practices have the greatest impact on firm performance among the motor vehicle assessment firms in Nairobi.

As indicated in Appendix IV (Rotated Component Matrix) these operations planning practices include: The establishment of mechanisms that link performance measures to recognition and reward systems; making of operation decisions on the location of the firm's service facilities based on the type of market; making of operations decision based on capacity in response to customer demands; the establishment of a Quality management policy aimed at ensuring continuous improvement; and the establishment of measurement of performance system, which focuses on non-financial and financial measures.

According to Table 4.4, the establishment of mechanisms that link performance measures to recognition and reward system is having the greatest impact on firm performance of the motor vehicle assessment companies in Nairobi since it accounts for up to 34.506% of the variation in firm performance. Other key operations planning practices are: the making of operation decisions on the location of the firm's service facilities based on the type of market (19.42%); making of operations decision based on capacity in response to customer demands (13.376%); the establishment of a Quality management policy aimed at ensuring continuous improvement (9.854%); and the establishment of a performance measurement system that focuses on both financial and non-financial measures at 9.508%.

4.5 Operations Planning and Firm Performance

A well-articulated operations plan capitalizes on a company's operations resources to enhance firm performance. The second variable of the research was to establish the association between

operations planning practices and the performance of firm among motor vehicle assessment firms in Nairobi. A multiple regression model was employed to establish the association between operations planning practices, which for this study was the predictor variables, and firm performance (dependent variable).

Using SPSS version 21, the subsequent regression coefficients have been applied to understand the magnitude and direction of the association. The β coefficients indicate the sensitivity of the variable, which is dependent owing to unit change in each of the variables that are independent. The error term ϵ captures the variations that cannot be explained by the model. Firm performance (dependent variable) was measured by Timeliness. The Regression Model is shown in Table 4.5.

Table 4.5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. Change	
1	.614 ^a	.877	.329	.68364	.877	7.854	5	65	.001	.845

a. Predictors: (Constant), The firm has established a performance measurement system that hinges on non-financial and financial performance measures, The firm has established mechanisms that link performance measures to recognition and reward systems , The firm makes its operation decisions on the location of its production facilities based on the type of market, The firm makes its operation decisions on capacity in response to customer demands , The firm has established a Quality management policy aimed at ensuring continuous improvement

b. Dependent Variable: Customer Satisfaction (Timeliness)

Source: Researcher (2016).

From Table 4.5 the Coefficient of Multiple Determination (R^2 Square) is 0.877 implying that that the regression line is of “*High goodness of fit*” explaining up to 87.7% of the variation in the firm performance of motor vehicle assessment firms in Nairobi. 12.3% of the variation could be due to other predictors not in the model.

To determine the combined effects of the predictor factors on the dependent measure, ANOVA was employed to estimate and measure interaction effects. The results are shown in table 4.6.

Table 4.6 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	18.354	5	3.671	7.854	.001 ^a
Residual	30.379	65	.467		
Total	48.732	70			

a. Predictors: (Constant), The firm has established a performance measurement system that hinges on measures of non-financial and financial performance, The firm has established mechanisms that link performance measures to recognition and reward systems , The firm makes its operation decisions on the location of its production facilities based on the type of market, The firm makes its operation decisions on capacity in response to customer demands , The firm has established a Quality management policy aimed at ensuring continuous improvement

b. Dependent Variable: Customer Satisfaction (Timeliness)

Source: Researcher (2016).

Table 4.6 indicates that the F static is 7.854 with a p-value of 0.001. This implies that the influence of operations planning practices on the performance of firms is significant because the p-value is less than 0.05.

Table 4.7 Operations Planning Practices – Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		
	B	Std. Error	Beta			Lower Bound	Upper Bound	
1	(Constant)	.414	.595		.696	.489	-.774	1.601
	The firm has established mechanisms that link performance measures to recognition and reward systems	.538	.105	.051	.502	.001	.263	.157
	The firm makes its operation decisions on the location of its production facilities based on the type of market	.251	.066	.381	3.832	.000	.382	.120
	The firm makes its operation decisions on capacity in response to customer demands	.436	.094	.466	4.656	.000	.249	.622
	The firm has established a Quality management policy aimed at ensuring continuous improvement	.305	.072	.007	.069	.003	.140	.150
	The firm has established a performance measurement system that hinges on measures of non-financial and financial performance	.140	.080	.181	1.738	.001	.021	.300

Source: Researcher (2016).

As per the Statistical Packages for Social Sciences generated model coefficients in Table 4.7, the

Equation $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5$ becomes;

$$Y = 0.414 + 0.538 (\pm.105)X_1 + 0.251 (\pm.066)X_2 + 0.436 (\pm.094)X_3 + 0.305 (\pm.072)X_4 + 0.140 (\pm.080)X_5$$

Where;

$Y =$ Firm Performance (Customer satisfaction)

$\beta_0 =$ Constant

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5 =$ Coefficients of the independent variables

$X_1 =$ The firm has established mechanisms that link performance measures to recognition and reward systems

$X_2 =$ The firm makes its operation decisions on the location of its production facilities based on the type of market

$X_3 =$ The firm makes its operation decisions on capacity in response to customer demands

$X_4 =$ The firm has established a Quality management policy aimed at ensuring continuous improvement

$X_5 =$ The firm has established a performance measurement system that hinges on measures of non-financial and financial performance

In relation to the regression equation established above, taking the entire independent variables at zero, the level of firm performance of motor vehicle assessment firms in Nairobi will be 0.414. The data findings analyzed also indicate that holding all other independent variables constant, a unit rise in the establishment of mechanisms that link performance measures to recognition and reward systems will translate to a 0.538 rise in the performance of the firm of the of motor vehicle assessment firms in Nairobi. The regression line also indicates that, a unit increase in making a firm's operation decisions on the location of its production facilities based on the type of market will translate to a 0.251 rise in the performance of firm of the of motor vehicle assessment firms in Nairobi. On the other hand a unit increases in making a firm's operation decisions on capacity in response to customer demands will translate to a 0.436 rise in

the performance of the firm of the of motor vehicle assessment firms in Nairobi. Keeping all other variables constant, a unit rise in the establishment of Quality management policy aimed at ensuring continuous improvement will translate to a 0.305 rise in the performance of the firm of the of motor vehicle assessment firms in Nairobi. The firm has established a performance measurement system that hinges on measures of non-financial and financial performance will translate to a 0.140 rise in the company performance of motor vehicle assessment firms in Nairobi. In conclusion, all the coefficients have p-values less than the critical value of $\alpha = 0.05$, hence all are statistically significant predictors. The relatively small t-values could be due to multicollinearity.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The study sought to establish the association between operations planning and the company performance of motor vehicle assessment firms in Nairobi. This chapter presents; the summary, conclusions, and recommendations of the study.

5.2 Summary of the Findings

According to the findings, the adoption of operations planning practices to build a firm's core competency is the most influential driver of operations planning among the motor vehicle assessment firms in Nairobi. Other key drivers of operations planning include: The adoption of operations planning practices to respond to investors' pressure; the adoption of operations planning practices to reduce production costs; the adoption of operations planning practices to meet client expectations; and the adoption of operations planning practices as a strategy to utilize new market opportunities.

The first study objective was to identify the various operations planning practices employed by motor vehicle assessment firms in Nairobi. The study revealed that the fact that the firm makes its operation decisions based on its facility endowment to enhance its performance; and that the firm makes its operation decisions on the location of its production facilities based on the type of market constitute the main structural decision areas that have been adopted by the motor vehicle assessment firms to a large extent. According to the findings, the making of operation decisions on capacity in response to customer demands has been adopted to the least extent among the motor vehicle assessment firms in Nairobi.

The second study objective was to establish the association between operations planning practices and performance among motor vehicle assessment firms in Nairobi. The findings of the regression analysis indicate a near perfect positive association between operations planning and organizational performance among the motor vehicle assessment firms in Nairobi as supported by the high Coefficient of Multiple Determination (R^2) of 0.877 and p-value of 0.001. This implies that up to 87.7% of the variation in the firm performance of motor vehicle assessment firms in Nairobi can be attributed to the operations planning practices they have adopted over time.

5.3 Conclusion

The study establishes a near perfect positive association between operations firm performance and planning among the motor vehicle assessment firms in Nairobi. The establishment of mechanisms that link performance measures to recognition and reward systems; making of a firm's operation decisions on the location of its production facilities based on the type of market; making a firm's operation decisions on capacity in response to customer demands; the establishment of Quality management policy aimed at ensuring continuous improvement; and the establishment of systems of performance measurement system which hinges on non-financial and financial performance are the specific operations planning practices that have had a significant effect on the company performance of the motor vehicle assessment firms in Nairobi.

5.4 Recommendations

The study unravelled a positive association between operations planning and organizational performance underscoring the need for local companies to implement these operation planning to enhance their dynamic capability through operations efficiency. This is further supported by the

fact that the study revealed a number of key operations planning drivers which could be making the local firms less competitive.

At policy level, there is need for the national and county governments to foster operations planning both in public and in public sector to enhance firm and national competitiveness. There is need for government and other key stakeholders keen on building a viable motor industry to focus on creating impetus to encourage operations planning including operation performance recognition and rewards systems.

5.5 Limitations of the Study

It is clear that a research of this scale ought to encompass a survey of sizeable number of companies. Nonetheless, material and time resources did not make this feasible and for this cause the research concentrated on motor vehicle assessment companies in Nairobi.

Due to the sensitivity of firm performance matters, some of the respondents were non-committal posing major challenge in the field during the data collection costing the researcher since he had to do a lot of data editing after field work. Despite these challenges the validity of the findings emanating from this study cannot be compromised.

5.6 Suggestions for Further Research

It is imperative to note that confirmatory factor analysis studies should be conducted as a means of further testing this study so as to establish and to confirm the findings of the study. Further studies should be carried out to test and confirm the factor loadings in different firms so as to establish the validity and strength of the model. In the same context, there is need for further research to focus on the essential success factors in the formulation of best practices in operations planning.

The fact that the degree to which various operations planning practices affects firm performance varies from one firm to the other, calls for further research efforts to identify optimal operations planning practices and on the possibility of setting benchmarks. The need for further research into this aspect of operations planning is further compounded by the facts that operations planning and efficiency is a relatively new phenomenon in Kenya.

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APPENDICES

APPENDIX I: INTRODUCTION LETTER



APPENDIX II: QUESTIONNAIRE

SECTION A: GENERAL INFORMATION

- 1) Name of your firm(Optional)
- 2) What is your position in the firm?.....
- 3) For how long has your firm been in existence? Years
- 4) For how long have you been working with this firm?..... Years

SECTION B: OPERATIONS PLANNING PRACTICES ADOPTED BY MOTOR VEHICLE ASSESSING FIRMS

- 5) Has your firm adopted any operations planning practices?

Yes No

Please tick where appropriate

- 6) **What are the drivers of adopting Operations planning in your firm?**

Please indicate on a Scale of 1 – 5 where: 1= Strongly Disagree, 2= Disagree, 3= Moderately Agree, 4= Agree and 5= Strongly Agree

No	Drivers of Operations Planning	1	2	3	4	5
i.	The firm has adopted operations planning practices to reduce on costs					
ii.	The firm has adopted operations planning practices to meet client expectations					
iii.	The firm has adopted operations planning practices to build its core competency					

iv.	The firm has adopted operations planning practices to respond to investors' pressure					
v.	The firm has adopted operations planning practices as a strategy to utilize new market opportunities					

7) To what extent has your Firm adopted the following Operations Planning practices?

Please indicate on a Scale of 1 – 5 where: 1 = To Avery Small Extent; 2 = Small Extent; 3 = Moderate Extent; 4 = Large Extent; 5 = Very Large Extent

OPERATIONS PLANNING PRACTICES		1	2	3	4	5
N						
o	1. Structural Decision Areas					
i.	The firm makes its operation decisions based on its facility endowment to enhance its performance					
ii.	The firm makes its operation decisions on the location of its service facilities based on the type of market					
iii.	The firm makes its operation decisions on capacity in response to customer demands					
	2. Infrastructural Decision Areas					
i.	The firm has put in place systems for planning and controlling of operations to enhance its performance					
ii.	The firm has established a Quality management policy aimed at ensuring continuous improvement					
iii.	The firm has an established sound work –organizational structures that clearly demarcates responsibilities and accountability in operations					
iv.	The firm has put in place strategic human resource management mechanisms that support proper training					

	and development to enhance productivity					
v	The firm has adopted a sound governance and management style to enhance employee-organizational commitment					
vi	The firm has put in place adequate new product development systems to enhance the development and design of new products and services					
vii	The firm has established a performance measurement system that focuses on both financial and non-financial performance measures					
viii	The firm has established mechanisms that link performance measures to recognition and reward systems					

SECTION C: FIRM PERFORMANCE

8. Please rate the following Aspects of customer services Satisfaction based on your experience with this company over the last fiscal year.

Please indicate on a Scale of 1 – 5 where: 1 = Very Satisfied; 2 = Fairly Satisfied; 3 = Neither Satisfied nor Dissatisfied; 4 = Fairly Dissatisfied; 5 = Very Dissatisfied

No	Customer Satisfaction Measures	(1)	(2)	(3)	(4)	(5)
i.	Delivery of the service (how problems were handled, reliability, outcome etc)					
ii.	Timeliness (waiting times, number of times contacted)					
iii.	Information (accuracy, enough information, kept					

	informed)					
iv.	Professionalism (competent staff, fair treatment)					
v.	Staff attitude (friendly, polite, sympathetic					

APPENDIX III: LIST OF MOTOR VEHICLE ASSESSMENT FIRMS IN NAIROBI

1. Anthony Succour Fernandes
2. Arc Assessors
3. Auto Decade Assessors
4. Auto Gallery assessors & Valuers
5. Autostar Assessors & Valuers
6. Autofield Assessors Ltd
7. Automobile profesional Assessors
8. Autorec Aessors
9. Autoscan Motor Assessors & Valuers
10. Autospot Valuers Loss Assessors, Loss Assessors & Adjusters
11. Autotech Motor Assessors Ltd
12. Best Image Automobile Assessors
13. Bright Loss Assessors
14. Brijack Assessors Ltd
15. Capital Alliance Valuers & Assessors
16. Carpricon Motor & Risk Assessors
17. City Adjusters & Assessors
18. Coast Accident & General Investigations Ltd
19. Coslid Insurance Assessors
20. Credible Automobile Valuers ltd
21. Danfield Motor-Tech Loss Assessors
22. Diplomatic Accident Assessors
23. Directive Motor Assessors
24. Discovery Auto Assessors
25. Elite Automobile Valuers & Assessors
26. Enigma Assessors
27. Excellent Auto Assessors
28. Experts Loss Assessors
29. Explore Auto Valuers & Assessors
30. Express Auto Assessors
31. Faulu Motor Assessors & Valuers
32. Fineline Motor Assessors
33. Global Risk management & Insurance investigations
34. Gradient Motor Assessors
35. Havillah Assessors
36. Hossaro Assessors
37. Index Assessment & Insurance Investigations
38. Insight Auto Assessors
39. Instep Loss Assessors
40. Intercounty Accident Assessors
41. Integrated Motor Assessors

42. Interstate Automobile Valuers & Assessors
43. Jevic East Africa
44. Jogith Motor Assessors
45. Kalamazoo Motor Assessors
46. Karconsult Assessors
47. Kenya Loss Assessors & Surveyors
48. Kibmat Loss Assessors
49. Latent Motor Assessors & Surveyors
50. Leone Motor Assessors Ltd
51. Lina Motor Assessors & Valuers
52. Links Valuers & Assessors Ltd
53. Maka Automobile Works & Assessors
54. Mararo Enterprises Ltd
55. Masters Assessors & Engineering
56. Mech Auto Technologists & Engineering
57. Mentor Valuers & Assessors
58. Metropolitan Motor Assessors
59. Midlane Assessors
60. Modern Assessors & Valuers
61. Motech Assessors & Valuers
62. Motor Technology Assessors & Valuers
63. Motorzone Consultants & Assessors
64. Muhuthu Consulting Engineers & Assessors
65. Nordics Assessors
66. On the Spot Investigations Ltd
67. Paramount Assessors Ltd
68. Piranha Automobile Valuers & Assessors
69. Poly-Tech Auto Assessors Ltd
70. Pragma- Tech Auto Assessors
71. Prima Motor Assessors
72. Prime Dots Assessors
73. Quality Motor Consultants
74. Quest Technical Consultants & Assessors
75. Rally Motor Assessors
76. Real Motor Assessors Ltd
77. Reflex Auto Assessors
78. Regent Automobile Valuers & Assessors
79. Safety Surveyors
80. Savitek Engineers & Motor Assessors
81. Sharp Consult Loss Assessor
82. Sherwin Associates
83. Sovereign Motor Assessors & Valuers
84. Spot- On Motor Assessors

85. Steering Automobile Valuers & Assessors
86. Strategic Automobile Valuers & Assessors
87. Texus Automobile Assessors
88. The Automobile Association of Kenya
89. Tierra Auto Assessors & Valuers
90. Timings Auto Assessors
91. Trinity Automobile Valuers & Assessors
92. Tropical Motor Assessors
93. Ukumbi Motor Valuers & Assessors
94. Uptown Motor Assessors
95. Vallet Loss Assessors
96. Vetech Motor Valuers
97. Vision Motor Consultants
98. Wareng Auto Assessors & Motor Assessors
99. Wheels Automobile Valuers & Assessors
100. World Global Automobile Valuers
101. Yamamoto Loss Assessors.

Source: IRA (2016).

APPENDIX IV: ROTATED COMPONENT MATRIX

Rotated Component Matrix^a

	Component				
	1	2	3	4	5
The firm makes its operation decisions based on its facility endowment to enhance its performance	.607	-.619	.325	.240	-.147
The firm makes its operation decisions on the location of its production facilities based on the type of market	.065	.930	.119	-.011	-.131
The firm makes its operation decisions on capacity in response to customer demands	-.076	.005	.853	.122	-.136
The firm has put in place systems for planning and controlling of operations to enhance its performance	-.402	.732	-.257	.229	.109
The firm has established a Quality management policy aimed at ensuring continuous improvement	.185	.037	-.033	.928	.076
The firm has an established sound work –organizational structures that clearly demarcates responsibilities and accountability in operations	.699	-.311	.455	.283	.056
The firm has put in place strategic human resource management mechanisms that support proper training and development to enhance productivity	.196	-.116	.796	-.455	.040
The firm has adopted a sound governance and management style to enhance employee-organizational commitment	-.746	.073	.341	-.057	-.349
The firm has established a performance measurement system that focuses on both financial and non-financial performance measures	-.022	-.025	-.072	.065	.977
The firm has established mechanisms that link performance measures to recognition and reward systems	.872	-.020	.052	.038	-.170

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations.