

**THE RELATIONSHIP BETWEEN DYNAMIC CAPABILITY AND
PERFORMANCE IN SHIPPING INDUSTRY IN KENYA**

**BY
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DECLARATION

This Research project is my original work and has not been presented for award of degree in any other university or institution for any other purpose.

Signed:..... Date.....

Edwin Were
D61/61301/2013

This management research project has been submitted for examination with my approval as the university supervisor.

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DEDICATION

I dedicate this project to my two handsome boys Shawn and Brighton and my loving wife Barbra for their support, sacrifice and patience in my absence while pursuing the degree. My special dedication also goes to my parents Havelock and Aninah for laying a firm education foundation and instilling a culture of self-sufficiency in pursuit of excellence. You all gave me the strength and will to pursue this course.

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TABLE OF CONTENT

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
LIST OF TABLES	viii
LIST OF FIGURES	ix
ABSTRACT	x
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background of the Study	1
1.1.1 Strategic Dynamic Capability	2
1.1.2 Organization Performance.....	3
1.1.3 The Shipping Industry in Kenya.....	4
1.2 Research Problem	5
1.3 Research Objectives	6
1.4 Value of the Study	7
CHAPTER TWO	8
LITERATURE REVIEW	8
2.1 Introduction.....	8
2.2 Theoretical Foundation of the Study	8
2.2.1 Resource Based Theory.....	8
2.2.2 Knowledge Based Theory	9
2.3 Strategic Dynamic Capability and Performance.....	10
2.4 Empirical Literature Review.....	12
2.5 Summary and Knowledge Gap	13
CHAPTER THREE	15
RESEARCH METHODOLOGY	15
3.1 Introduction.....	15
3.2 Research Design	15
3.3 Population of the Study	15
3.4 Data Collection	16

3.5 Data Analysis	16
CHAPTER FOUR	18
DATA ANALYSIS, RESULTS AND DISCUSSION.....	18
4.1 Introduction	18
4.1.1 Response Rate.....	18
4.1.2 Data Validity.....	18
4.1.3 Reliability Analysis	18
4.2 Demographics	19
4.2.1 Number of Employees	19
4.2.2 Duration in Years Shipping Company has been in Operation.....	20
4.2.3 Ownership Structure.....	21
4.2.4 Assets Owned	22
4.2.5 Capital Structure	23
4.2.6 Operation in other countries	24
4.3 Dynamic Capability.....	25
4.3.1 Organizational Capability.....	26
4.3.2 Capability Dynamism.....	27
4.3.2.1 Capital.....	27
4.3.2.2 Training.....	29
4.3.2.3 R & D Activities.....	31
4.3.2.4 Technology	34
4.4 Performance	36
4.5 Correlation Analysis.....	38
4.5.1 Coefficient of Correlation.....	38
4.5.2 Coefficient of Determination (R^2).....	39
4.5.3 Regression Analysis	39
4.5.4 Multiple Regression	40

CHAPTER FIVE	42
SUMMARY, CONCLUSION AND RECOMMENDATIONS	42
5.1 Introduction.....	42
5.2 Summary	42
5.3 Conclusion	44
5.4 Recommendation	44
5.5 Suggestion for further studies	44
5.6 Limitation of the Study	45
REFERENCES.....	46
APPENDICES.....	51
Appendix I: Letter of Introduction.....	51
Appendix II: Questionnaire.....	52
Appendix III: List of shipping line in Kenya.....	55

LIST OF TABLES

Table 4.1 Reliability Coefficient.....	19
Table 4.2 Number of employees in the shipping company.....	20
Table 4.3 How long has the shipping company been in operation.....	21
Table 4.4 Capital structure.....	24
Table 4.5 Number of countries operating in.....	25
Table 4.6 Organizational capabilities.....	26
Table 4.7 Capital Assessment needs.....	28
Table 4.8 Extent to which capital needs assessment has improved performance.....	29
Table 4.9 Frequency of Training.....	30
Table 4.10 Extent of agreement to performance.....	34
Table 4.11 Times technology needs has changed.....	36
Table 4.12 Extent to which technology has improved performance.....	36
Table 4.13 Performance in Teus, Volume & Weight.....	38
Table 4.14 Sales performance in the last two years.....	38
Table 4.15 Pearson correlation.....	39
Table 4.16 Coefficient of determination.....	40
Table 4.17 Anova.....	40
Table 4.18 Multiple regression.....	41

LIST OF FIGURES

Figure4.1 Ownership structure.....	22
Figure 4.2 Assets owned.....	23
Figure 4.3 Capital needs assessment.....	27
Figure 4.4 Training needs assessment on performance.....	31
Figure 4.5 R & D activities.....	32
Figure 4.6 Changes in R & D objectives.....	33
Figure 4.7 Technology needs assessment.....	35
Figure 4.8 Changes in performance in the last 5 years.....	37

ABSTRACT

Dynamic capabilities help units extend, modify, and reconfigure their existing operational capabilities into new ones that better match their changing environment. Global competition, technological advances and changing needs of consumers, competitive paradigms are driving firms to compete, simultaneously along different dimensions such as design and development of products, manufacturing, and distribution, communicating and marketing. The objective of this study was to determine the relationship between dynamic capability and performance in the shipping industry in Kenya. The specific objective was to determine the organizational capabilities that affect performance and the effect of capability dynamism on performance in the shipping industry. The study used two theories namely Resource based and Knowledge based to strengthen its case on the relationship between dynamic capability and performance. The target population was 30 registered shipping companies operating in Mombasa Kenya. The study adopted a cross sectional survey for its research design. A modified Likert scale questionnaire was developed divided into three parts. A pilot study was carried out to refine the instrument. The quality and consistency of the survey was further assessed using Cronbach's alpha. The overall Cronbach's alpha for the four categories which was 0.752. Data analysis was performed on a computer using Statistical Package for Social Science (SPSS Version 22) for Windows. Analysis was done using frequency counts, percentages, means and standard deviation, regression, correlation and the information generated was presented in form of graphs, charts and tables. Out of the 30 questionnaire administered, 22 were returned making a response rate of 73.33%. There is a very strong positive correlation between organizational capability dynamism with performance as demonstrated by the Karl Pearson correlation model of 0.768 and 0.880. The study concluded that there is a positive relationship between dynamism and performance. The study recommended that shipping companies should invest more in research and development to deal with the ever changing external environment. This is because all the shipping lines operate in more than one country as per the research finding which pose different and ever changing environmental challenge.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Dynamic capabilities help units extend, modify, and reconfigure their existing operational capabilities into new ones that better match their changing environment (Winter 2003). Global competition, technological advances and changing needs of consumers, competitive paradigms are driving firms to compete, simultaneously along different dimensions such as design and development of products, manufacturing, distribution, communicating and marketing (Garg, Desh, & Singh, 2008). The pattern of effective dynamic capability depends upon the market dynamism. Dynamic markets therefore require effective dynamic capabilities relying heavily on existing knowledge (Eisenhardt and Martin, 2000). Capabilities are often firm-specific and are developed over time through complex interactions between the firms resources (Amit Schoemaker, 1993).

This study is anchored on two important theories, that is the Resource based theory and Knowledge based theory. Resource based theory of Helfat and Peteraf (2003), defines resource as an asset or input to production (tangible or intangible) that an organization owns, controls, or has access to on a semi-permanent basis. Knowledge based theory is a key intangible resource that is the primary source of a sustainable competitive advantage (Acedo et al., 2006; Conner and Prahalad, 1996). The role of the firm is not simply to acquire an assortment of resources and capabilities, but rather to develop its organizational knowledge to produce a sustainable competitive advantage (Grant, 1996a).

Shipping is considered as the lifeblood of the global economy. More than 80% of the world goods are carried by ship (Mason and Nair, 2013, Sui and Lam, 2011). The global economic activities are changing and shipping industry is facing some structural changes. There is a dramatic shift in the world manufacturing and

trading. The market and marketplaces are now global and production is located everywhere. Just like any other industry shipping is faced with very an ever changing environment posing challenge to firm that do not continuously change their existing capabilities.

1.1.1 Strategic Dynamic Capability

Dynamic capability is defined as a firm's behavioral orientation constantly to integrate, reconfigure, renew and recreate its resource and capabilities and most importantly, upgrade and reconstruct its core capabilities in response to the changing environment to attain and sustain competitive advantage. Teece et al (1997) defines dynamic capabilities as the firm's ability to integrate, build and reconfigure internal and external competences to address rapidly changing environment. Capabilities refer to a firm capacity to deploy resources, usually in combination, and encapsulate both explicit processes and those tacit elements (such as know-how and leadership) embedded in the processes. Hence, capabilities are often firm-specific and are developed over time through complex interactions between the firms resources (Amit Schoemaker,1993).

Dynamic capabilities explain how firms adapt to environmental dynamism by modifying their underlying resources and capabilities. Dynamic capabilities have been defined as a firm's "ability to integrate, build, and reconfigure internal and external competencies" to address changing environments (Teece, et al., 1997). Dynamic capabilities have a direct effect on firm's performance and competitive advantage, as well as an indirect through resources, usually in combination, and encapsulate both explicit processes and those tacit elements (such as know-how and leadership) embedded in the process.

As Teece et al. (1997) explain, the concept of dynamic capabilities emphasizes on the development of management capabilities, and it is based on the difficulty of imitating combinations of organizational, functional and technological skills. Hence, it is important to highlight company characteristics such as the management of R&D (Research and Development), product and process

development, technology transfer, intellectual property, manufacturing, human resources, and organizational learning. In light of this, dynamic capabilities can be seen as an emerging and potentially integrative approach to understanding the newer sources of competitive advantage (Teece et al., 1997).

Dynamic capabilities draw from both the resource-based view of the firm and evolutionary economics (Di Stefano, Peteraf, and Verona, 2010; Barney, 1991; Nelson and Winter, 1982). From a resource-based perspective, dynamic capabilities were originally conceptualized to redress a gap in the ability of the resource-based view to explain sustainable competitive advantage in dynamic, Schumpeterian environments (Teece, Pisano, and Shuen, 1997).

The emerging consensus is that dynamic capabilities do not directly contribute to a firm's performance or its competitive advantage; instead dynamic capabilities permit a firm to manipulate its resources (Helfat et al, 2007). Dynamic capabilities are a source of competitive advantage when applied sooner, more astutely, and more fortuitously than competitors (Eisenhardt and Martin, 2000; Wang and Ahmed, 2007).

1.1.2 Organization Performance

Performance is the level of target achieved by an organization (Sloma, 1980), or as an evaluation on the effectiveness of individuals, groups, or organizations. At the individual level, it refers to job satisfaction, achieved goals, and personal adjustment; at the group level, it refers to morale, cohesion, efficiency, and productivity; and at the organizational level, it is about profit, efficiency, productivity, absenteeism rate, turnover rate, and adaptability (Ivancevich, 1977). Lin (2005) pointed out that performance is not only about previous achievements, but also includes the potential ability to successfully achieve future goals. Robbins and Coulter (1996) further pointed out that performance is an objectively existing fact that provides both objective and subjective evaluation. Organizational performance constitutes all behaviors related to objectives depending on the contribution levels of individuals to the organization (Borman and Motowidlo,

1993). The final goal of an enterprise is to enhance performance; therefore, the enhancement of organizational performance is at the core of corporate strategic management, which itself influences prospects of an enterprise (Venkatraman and Ramanujam, 1986).

Enhancing organizational performance is the focus of every manager in every enterprise. In order to succeed at enhancing organizational performance, it is crucial for an organization to establish a comprehensive measurement index that provides managers and staff with clear directions and goals set by the enterprise. Ruekert *et al.* (1985) divided the organizational performance measurement index into three dimensions: efficiency, effectiveness, and adaptability. Keats (1988) pointed out that the organizational performance measurement index could be classified into univariate and multivariate effectiveness measures. Currently, the performance measurement index is mostly based on multivariate effectiveness measures, which itself can be divided into financial and non-financial measurement indexes. Further, Maltzet *et al.* (2003) developed the dynamic multi-dimensional performance and five organizational performance measurement indexes including financial performance, market/customer, process, people development, and future to measure the success of different types of corporate management. Im and Workman (2004) proposed the relative market share rate, relative sales value, and relative return on investment rate, relative revenue rate, and degree of target achievement as the five dimensions to measure organizational performance.

1.1.3 The Shipping Industry in Kenya

The shipping business environment is getting more instable, competition is increasing (Tongzon *et al.*, 2009), profit margins are decreasing, expected service quality is increasing and demand is becoming more uncertain (Panayides and Wiedmer, 2011, Robinson R., 2005). In this context, shipping lines need to formulate and implement winning strategies to secure revenue, margin and growth. And one may consider that strategic management scholars would hold a competitive advantage in order to address some very inspiring research avenues.

According to Kenya Ports Authority website www.kpa.go.ke the first ship is believed to have docked at the Mombasa harbor 1890. Though no written document states exactly when the first ship arrived, historians cite that Vasco Da Gama arrived in the East African Coast in 1498. Over the years the shipping industry has been growing in leaps and bounds. According to Kenya Maritime Authority website www.kma.go.ke there are over 30 shipping companies currently operating in Kenya. They are involved in export and import business. With the advent of developing shipping industry in Kenya, the government saw the need to regulate the shipping industry and therefore in 2004, Kenya Maritime authority was created as a state corporation. It is the mandate of Kenya Maritime Authority to ensure fair play in the shipping industry, register vessels and ensure that they comply with the safety standards among other key functions and mandates.

1.2 Research Problem

Global competition, technological advances and changing needs of consumers, competitive paradigms are driving firms to compete, simultaneously along different dimensions such as design and development of products, manufacturing, distribution, communicating and marketing (Garg, Desh, & Singh, 2008) Dynamic capabilities help units extend, modify, and reconfigure their existing operational capabilities into new ones that better match their changing environment (Winter, 2003). The pattern of effective dynamic capability depends upon the market dynamism. Dynamic markets therefore require effective dynamic capabilities relying heavily on existing knowledge (Eisenhardt and Martin, 2000).

Shipping companies in Kenya due to the dynamic environment in the industry as already cited in the background, need to integrate, build, structure and reconfigure internal and external competences. They need to generate multiple sustained competitive capabilities simultaneously with the changing government regulations, demand levels and consumer perception of international price levels. Internal integration (internal communication, integrative strategies, job training,

process integration, organization reengineering) and external integration (external communication and network of collaboration) of capabilities.

Boccardelli and Magnusson (2006), in their study on dynamic capabilities in early- phase entrepreneurship on mobile internet industry. The study underlined the importance of entrepreneurs to balance the striving for distinctive capabilities that provide competitive advantage, and the experimentation and improvisation needed to adapt to changes in the market, but considered mostly technology aspect of the dynamic capability. Ngeera (2013) studied the application of dynamic capabilities approaches in commercial banks in Kenya and recommended a further research on other institutions that experienced bad results in their dynamic capability approaches and those that had disastrous approach. Muthiani (2008), indicated that oil companies needed to exploit the gains of differentiation by investing on attributes valued by customers and noted that oil marketers needed to strike a balance between quality of product and price; Livohi (2012), study on downstream supply chain performance measurements recommended that oil marketing companies should make their organizational systems and supply chain process flexible to ensure positive changes that arise from performance metrics, can be adopted in the downstream supply chain operations. This study is to add to the pool of knowledge of dynamic capability in the shipping industry in Kenya; what dynamic capabilities are developed by the shipping companies in Kenya? What is the relationship between dynamic capabilities and performance in shipping industry in Kenya?

1.3 Research Objectives

This study was guided by the following research objectives;

1. To determine organization dynamic capability that influence performance in shipping lines in Kenya
2. To establish the relationship between dynamic capability and performance in shipping lines in Kenya.

1.4 Value of the Study

This study will contribute to the literature in dynamic capability approaches especially about how the shipping companies can utilize the dynamic capabilities approach to benefit in the focus of sound strategies, resource benefit view, cost reduction, and the overall return. It will form the foundation upon which other related and replicated studies can be based on.

The study will also assist the government through the Kenya Maritime Authority and the relevant ministry in formulating appropriate strategies that can be used and applied by the shipping lines in formulating sound policies that will improve decision-making processes in enhancing competitive advantage. These policies will also be appropriate in enhancing the performance of the shipping companies in Kenya.

The study sought to generate information that will be used by various stakeholders interested in the application and awareness of dynamic capabilities in the shipping lines in Kenya. It will enable the board of directors and management of the various shipping companies to identify areas of weakness that need attention and foster sound strategic choices to deliver maximum investment value. The study will benefit management of the shipping companies as they consult in an endeavor to focus on key strategies for business development and growth.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discussed the literature on dynamic capability approaches and how it contributes to organizational performance. It was informed by a review of relevant literature and guided by the theoretical review.

2.2 Theoretical Foundation of the Study

The dynamic capabilities approach constitutes an extension to the resource-based perspective (Collis & Montgomery, 1995). This study will therefore be guided by a review of the resource based theory and the knowledge based theory of the firm.

2.2.1 Resource Based Theory

According to Helfat and Peteraf (2003), resource is an asset or input to production (tangible or intangible) that an organization owns, controls, or has access to on a semi-permanent basis. Certain resources are superior to others due to market imperfections, resulting in different levels of efficiency (Barney, 1991; Dierickx and Cool, 1989). The idiosyncratic combination of these resources in firms is the source of competitive heterogeneity (Helfat and Peteraf, 2003; Lockett et al., 2009). Resources can include not only tangible physical capital, but also intangible resources embedded in human and organizational capitals such as knowledge (Amit and Schoemaker, 1993; Barney, 1991).

Considering resource-based value retention, if an asset or idea is easily replicated and does not require special resources to exploit, then there are not supernormal profits available from it. However, if the asset is tightly protected by copyright or mechanistic means, then the firm should retain economic gains (Teece et al., 1997). Isolating mechanisms are implemented by organizations to prevent the diffusion of firm-specific resources and capabilities throughout the industry (Barney, 1991). This concept of resource position barriers stems from the

ownership of resources that affect the cost and/or revenues of those who attempt to acquire the resources later (Wernerfelt, 1984).

Piccoli and Ives (2005) specifically note two fundamental dynamic processes that contribute to resource barriers: organizational learning; and asset stock accumulation. The two concepts also contribute to the knowledge base view, particularly if the asset being accumulated is knowledge. As observed by McWilliams and Siegel (2011), the resource-based perspective clearly indicates that firms should implement organizational change towards sustainability, but it does not provide a compelling explanation of why many firms are still hesitated or unable to do so. Indeed, firms hold different views on dynamic capabilities.

2.2.2 Knowledge Based Theory

Knowledge is embedded and carried through multiple entities including organizational culture and identity, policies, routines, documents, systems, and employees. Originating from the strategic management literature, this perspective builds upon and extends the resource-based view of the firm (RBV) initially promoted by Penrose (1959) and later expanded by others (Wernerfelt 1984, Barney 1991, Conner 1991).

Knowledge is a key intangible resource that is the primary source of a sustainable competitive advantage (Acedo et al., 2006; Conner and Prahalad, 1996). The role of the firm is not simply to acquire an assortment of resources and capabilities, but rather to develop its organizational knowledge to produce a sustainable competitive advantage (Grant, 1996a). The knowledge-based theory rests on the assumption that resource and capability-based advantages are derived from superior access to and integration of specialized knowledge (Grant, 1996a). Knowledge is created and held by individuals, but can become embedded within the organization as organizational processes and routines are performed repeatedly (Conner and Prahalad, 1996).

Firms can, therefore, be viewed as bundles of knowledge, where knowledge is an asset that serves as a source of differentiation and competitive advantage (Dierickx and Cool, 1989). Two critical knowledge processes in firms associated with the bundling of knowledge are creation and transfer (von Krogh et al., 2001). Organizational knowledge creation can be considered the process of making available and amplifying knowledge resources created by individuals as well as crystallizing and connecting it to an organization's knowledge system (Nonaka et al., 2006). Once created, knowledge must be either brought into the firm or moved within it. The transfer of knowledge within organizations is not a trivial problem as the same complex technologies that are proof against imitation are also difficult to codify and teach to others (Kogut and Zander, 2003). External knowledge transfer challenges include different levels of knowledge transfer abilities between alliance partners, where those more effective at transferring knowledge outperform those less adept (Dyer and Singh, 1998).

A firm with dynamic capabilities can integrate and redeploy knowledge resources, and as a result obtain greater performance. There is some agreement in prior research regarding the relationship between dynamic capabilities and performance. Griffith et al. (2006) suggest that developing dynamic capabilities can lead to a better performance. Similarly, Morgan et al. (2009) found that dynamic capabilities facilitate the business performance of a firm. Roberts and Grover (2011) provide evidence of a positive relationship between dynamic capabilities and performance.

2.3 Strategic Dynamic Capability and Performance

There is increasing evidence that firm performance is affected by firm's abilities to integrate, build and reconfigure their resources and competencies, which Teece et al. (1997) termed "Dynamic Capabilities". For example, Henderson and Cockburn (1994) attest that architectural competence in pharmaceutical industry, that is, a firm's ability to integrate knowledge from external sources, is positively associated with research productivity, as measured by patent counts. Iansiti and Clark (1994) explore "integration capability" in the automobile and computer

industries and finds broad empirical support for their hypotheses that a firm's knowledge-integration capability in product development is positively correlated with positive firm performance and with performance improvement over time. Kale (1999) reports that knowledge articulation and codification, potentially important antecedents of dynamic capability, help explain higher joint venture success rates across various industries. Similarly in his study of post-acquisition integration process in the banking sector Zollo (1998) finds that acquirers who devoted more effort to codifying their integration processes significantly improved their return on assets relative to competitors.

Empirical testing concerning the influence of dynamic capabilities on firm performance has been hampered by difficulties regarding their description, operationalization and measurement and by their assumed tautological relationship with firm performance. However, there is increasing evidence that a firm's dynamic capabilities significantly affect firm performance. For example, Henderson and Cockburn (1994) confirm that a firm's ability to integrate knowledge from external sources is positively related to its research productivity, measured by patent counts. Zollo and Singh (1998) in their study of post-acquisition integration processes in the banking sector, provide evidence that acquirers who invested more effort in codifying their integration processes achieve superior profitability performance compared to competitors. Similarly, Deeds et al. (1999) show that dynamic capabilities such as research personnel quality or alliance formation processes are significantly related to the number of newly developed products in the biotechnology sector.

Despite the ongoing progress made in the empirical inquiry of the differential effects of specific dynamic capabilities, it seems that few studies have provided a comprehensive account of their precise impact on firm performance. David Collis (1994) suggests that dynamic capabilities, which can be defined as higher-order or meta-capabilities are important because they may help firms to avoid path dependencies imposed by their current lower-order competences. Therefore, a firm has to develop capabilities to learn and redefine its resource base in order to

overcome the trap laid by their existing competences and create new sources of competitive advantage.

Eisenhardt and Martin (2000) reach the same conclusion using a different argument. More specifically, they assume that although dynamic capabilities can be considered as valuable and rare, at the same time they are equifinal i.e. similar across firms in terms of their key attributes, and therefore are neither inimitable nor immobile. Thus, dynamic capabilities cannot in themselves be a source of sustainable competitive advantage; rather they contribute to the achievement of superior firm performance by combining and renewing functional competences which in turn affect performance.

In sum, we could argue that dynamic capabilities build and reconfigure resource positions (Eisenhardt and Martin, 2000), zero-order capabilities (Winter, 2003), operational routines (Zollo and Winter, 2002) or operational capabilities (Helfat and Peteraf, 2003) and, through them, affect performance. This chain of causality designates an indirect link between dynamic capabilities and performance. However, the mechanisms by which dynamic capabilities influence firm performance are not well understood (Zott, 2003).

2.4 Empirical Literature Review

A study by Druid (2007) expounds on the concept of dynamic capabilities and its impact on firm performance. The study examines the logical links among dynamic capabilities, functional competences and firm performance. It proposes and tests a model which assumes that dynamic capabilities' influence on firm performance is mediated by functional capabilities. In this model dynamic capabilities can be conceptualized as higher order strategic processes that integrate, recombine and generate new technological and marketing capabilities which in turn shape firm performance. In an effort to investigate this model empirically, the research attempts to operationalize dynamic capabilities as a composite, unified construct defined by three interrelated, although distinct, dimensions: coordination capability, learning capability and strategic competitive response capability.

Newbert (2007) analyzed existing empirical research on the resource-based view and found that among all resource-based approaches, the dynamic capabilities view is the least empirically investigated stream, he noted that empirical research on dynamic capabilities is still in its infancy. Furthermore, he found that the research published prior revealed inconsistent findings less than 40% of studies found a relationship between dynamic capabilities and any form of performance/competitive advantage. He suggested that this may be due to the nature of how the dynamic capability performance relationship was tested. Arend & Bromiley (2009) criticize the ability of the dynamic capability view to cohesively explain organizational change with logical consistency, conceptual clarity and empirical rigor. They identify four key problem areas that limit the potential contribution of the dynamic capability research stream to strategy and management scholarship.

Baretto (2010) provides a more comprehensive review of a wider range of researching the field. In line with Arend & Bromley (2009), he concludes that a ‘theory’ of dynamic capabilities does not yet exist. This is largely due to the fact that no commonly agreed upon definition of dynamic capabilities has emerged Giudici & Reinmoeller (2012) provide the most recent critical review of dynamic capabilities research. They investigate whether the dynamic capability construct is a case of reification by reviewing 104 articles across a wide range of journals and disciplines in which the dynamic capability construct featured prominently. Looking at how articles in the sample are related to each other via cross-citations, they conclude that “the construct deserves more focused research, rather than to be prematurely abandoned.

2.5 Summary and Knowledge Gap

The concept of dynamic capabilities has progressively flourished also in other areas of investigation of the firm and organization behavior, as it has turned out to be very fruitful in addressing the way organizations deal, or fail to deal, with technological challenges (Dosi *et al.*, 2000).

Thus, dynamic capabilities seem to have become a sort of micro-foundation of the literature, mainly with an evolutionary background, which indigenizes technological change by linking the advent of new technological paradigms to the evolution of the firm knowledge-base (Freeman, 1982). That the firms' success in managing their changing environment is not exclusively a matter of strategies appears a quite established result. Their capabilities are at least as important in accommodating and, eventually, reconfiguring their structures in front of some kind of environmental turbulence, so that dynamic capabilities occupy a central place in the investigation of the firm dynamics.

As this overview shows, a common denominator for the evolution factors of dynamic capabilities does exist. Even though there is a multitude of answers to the question regarding the origin of dynamic capabilities, researchers often focus on single influences and rarely take the context of companies into account, this study therefore wishes to address this gap.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research methodology that was used to carry out the study. The chapter looked at research design, population, data collection and data analysis.

3.2 Research Design

The researcher used descriptive cross-sectional survey because most of these companies are situated in Mombasa. A cross-sectional survey collects data to make inferences about a population of interest (universe) at one point in time. Descriptive study is concerned with identifying the characteristics of an observed phenomenon or exploring possible correlation among two or more phenomena (Mugenda, 2003). Sekaram (2006) observes that the goal of descriptive research is to offer the researcher a profile or describe relevant aspects of the phenomena of interest from the individual, organization, industry or other perspective.

In addition the design best fit in the ascertainment and description of characteristics of variable in this research study and allows for use of questionnaires, interviews and descriptive statistics such as frequencies and percentages. In addition a descriptive survey method used will yield quantitative results which can be summarized through statistical analyses.

3.3 Population of the Study

The population of this study comprised all shipping lines companies operating in Kenya. According to the Kenya Maritime Authority and Kenya Ports Authority, there are 30 shipping companies

The researcher used census survey because most of shipping companies are situated in Mombasa and the number of the shipping companies. Mugenda (2003)

recommend a sample size of at least 30 and therefore census survey is justified in this case.

3.4 Data Collection

Cooper &Schindler (2011) contend that it is important to have several sources of information for verification and comprehensiveness.The primary data will be collected using questionnaires that will be dropped and picked later from the respondents. Orodho and Njeru (2003) stated that in questionnaires respondents fill in answers in written form and the researcher collects the questionnaire with the completed information.

Questionnaires were both open ended and closed ended questions were used by the researcher to collect primary data. The questionnaires are used in the study as they require less time, are less expensive, permits collection of data from a wide population and respondents 'anonymity ensures that they give honest answers. The researcher will administer the questionnaire to the respondents. The respondents are the shipping companies operating in Mombasa. The researcher obtained secondary data from reports and records maintained by the Kenya ports Authority and Kenya Maritime Authority because they are the regulators in the shipping industry and their data can be verified and relied upon. The researcher used data collection tools such as observation and interview in order to get as much information from the respondents as possible.

3.5 Data Analysis

Kothari (2009) argues that data collected has to be processed, analyzed and presented in accordance with the outlines laid down for the purpose at the time of developing the research plan. Data analysis involves the transformation of data into meaningful information for decision making. It will involve editing, error correction, rectification of omission and finally putting together or consolidating information gathered. The collected data was analyzed quantitatively and qualitatively. Descriptive and inferential statistics was done using SPSS version

22. Set of data will be described using percentage, mean standard deviation and coefficient of variation and presented using tables, charts and graphs.

To establish the relationship between the dynamic capabilities as the independent variables and firm performance as the dependent variable, the researcher will use multiple regressions and correlation coefficient and coefficient of determination to help determine the relationship between the variables under study. Model used is to establish the relationship between dynamic capability and performance. The model specification was as follows:

$$\mathbf{Regression} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where α : is a constant term,

β_n : coefficients to be determined

Y: the dependent variable (Performance).

X_1 : Organizational Capabilities

X_2 : Capability dynamism

ε : error term

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents analysis of the data on the relationship between dynamic capability and performance in shipping industry in Kenya. The chapter also provides the major findings and results of the study and discusses those findings and results against the literature reviewed and study objectives. The data was mainly presented in frequency tables, pie charts, means and standard deviation.

4.1.1 Response Rate

The study targeted 30 shipping companies in Mombasa County, Kenya. From the study, 22 out of the 30 sample respondents filled-in and returned the questionnaires making a response rate of 73.3%. According to Mugenda & Mugenda (1999) a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent; therefore, this response rate was adequate for analysis and reporting.

4.1.2 Data Validity

The researcher asked experts, three academicians, to assess the scales' content validity. Accordingly, the researcher made changes on the first draft in terms of eliminating, adding or rewording some of the items included in that draft.

4.1.3 Reliability Analysis

Prior to the actual study, the researcher carried out a pilot study to pre-test the validity and reliability of data collected using the questionnaire. The pilot study allowed for pre-testing of the research instrument. The results on reliability of the research instruments are presented in Table 4.1

Table 4.1: Reliability Coefficients

Cronbach's

Scale	Alpha	Number of Items
Organization Capability	0.764	4
Capability Dynamism	0.809	11

Source: Research Data

The overall Cronbach's alpha for the two categories which is 0.752. The findings of the pilot study shows that all the two scales were reliable as their reliability values exceeded the prescribed threshold of 0.7 (Mugenda and Mugenda, 2003).

4.2 Demographics

The demographic information was based on number of employees, how long the shipping company has been operating, ownership structure, assets that the shipping company owns, capital structure of the shipping company and whether this shipping company operates in another country.

4.2.1 Number of Employees

The study sought to know the number of employees of shipping company. This was done to find out the average number of employee in the Shipping companies. This was an open ended question that respondent were required to fill in the figure. The main purpose was to establish the average number of employees for the companies under study. The result are summarized in table 4.2. The range was from zero to above 50 employees for ease of analysis.

Table 4.2 Number of employees of the shipping companies

How many employees does Company have			
Number of employees	Frequency	Percent	Cumulative
			Percent
Below 50	3	13.6	13.6
Between 50 & 100	12	54.5	68.2
Between 100 & 150	4	18.2	86.4
Between 150 & 200	2	9.1	95.5
200 & Above	1	4.5	100
Total	22	100	

Source: Research Data,2015

From table 4.2 above, majority of shipping companies have between 50 and 100 employees with 54.5%. Shipping companies with less than 50 employees was 13.6%, between 100 and 150 was 18.2%, between 150 and 200 employees was 9.1% and Shipping Company with over 200 employees was 4.5%.

4.2.2 Duration in Years Shipping Company has been in Operation

The study sought to know how long shipping company has been operating. This was a closed ended question limiting the respondent to the give range of years. They were asked to tick the box of less than 5 between 5 to 10, between10 to 15, between15 to 20 and more than 20years. The main goal was to understand the average duration most the shipping companies have been in operation. This was necessary to allow analysis of data. Table 4.3 below shows the results as follows:

Table 4.3 How Long the Shipping company has been in operation

How long Has Your Company Been In Operation			
Years	Frequency	Percent	Cumulative Percent
Between 5-10 Years	1	4.5	4.5
Between 10-15 Years	1	4.5	9.1
Between 15-20 Years	5	22.7	31.8
More than 20 Years	15	68.2	100
Total	22	100	

Source: Research Data, 2015

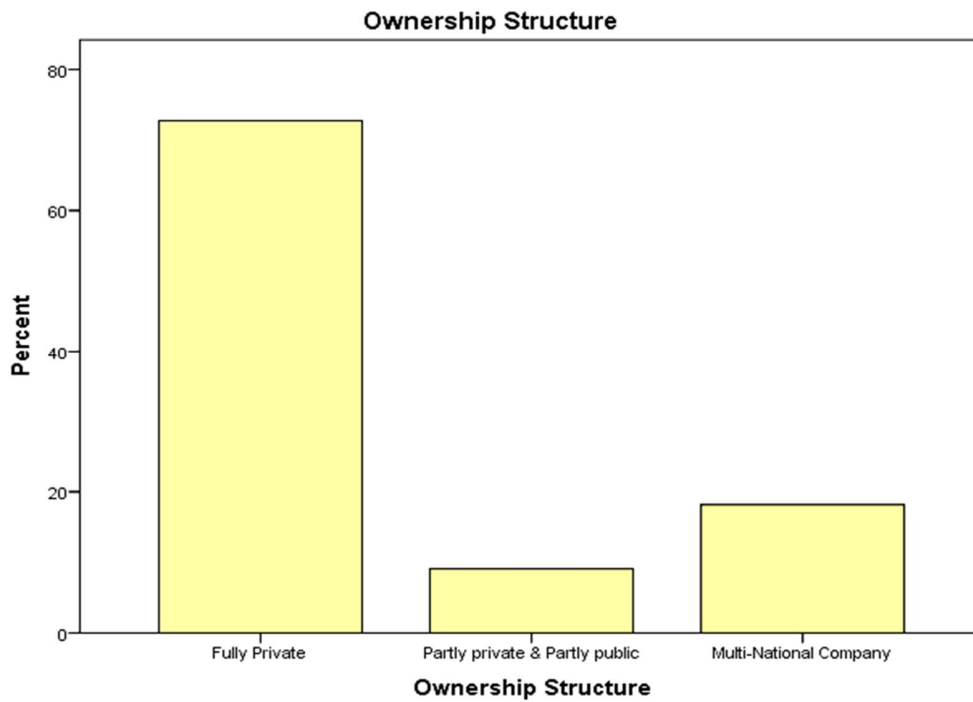
The study reveals that shipping companies that have operated for more than 20 years were the majority with 68.2% and those that have operated between 15 and 20 years were 22.7% and those that have operated between 10 and 15 years and between 5 and 10 years were 4.5% and 4.5% respectively.

4.2.3 Ownership Structure

This was a closed ended question which sought to know how these companies are owned. The respondent were required to tick whether the company is fully private owned, partly private and partly public owned, listed or multinational.

The main purpose to understand the ownership structure of the companies under study. The Ownership structure plays big role in terms how firm can engage in dynamism. The finding are shown in Figure 4.1

Figure 4.1 Ownership Structure



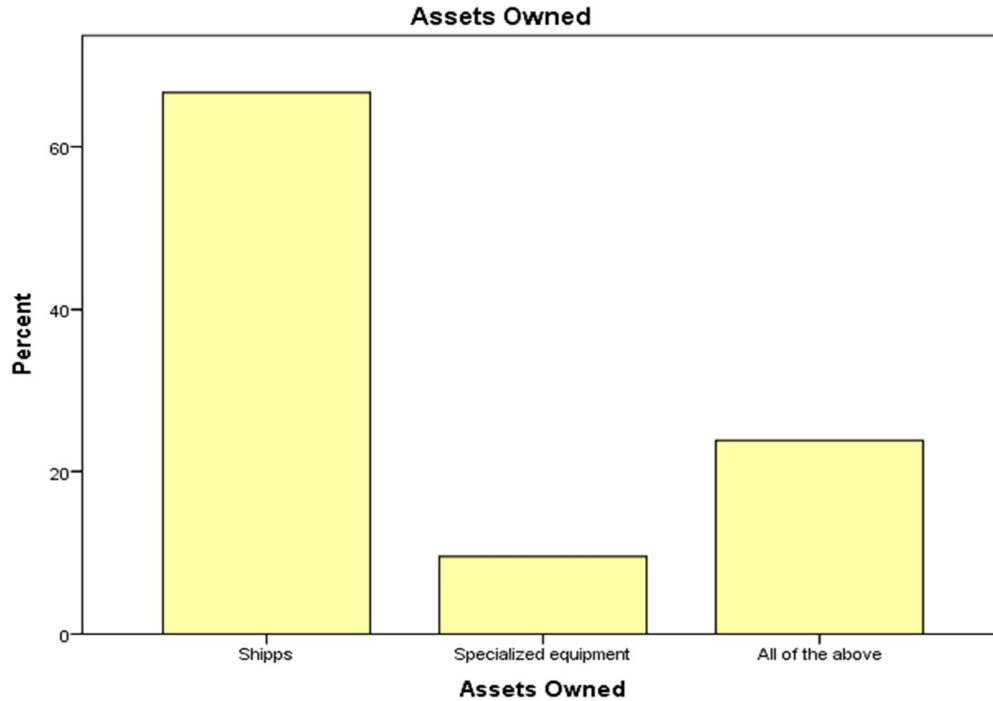
Source: Research Data, 2015

From figure 4.1 below, the study showed ownership structure as follows: fully private was 72.7%, partly private and partly public was 9.1% and multi-national was 18.2%. It is clear that majority of the shipping companies in Mombasa are fully privately owned.

4.2.4 Assets Owned

The study sought to find out assets owned by the shipping companies. This is source of capability for the shipping companies. The respondent were given closed ended question where they were required to tick if the own buildings, ships and specialized equipment. They assist in improving their performance. The main purpose was to find out which asset are owned by the shipping company under the survey.

Figure 4.2 Assets Owned



Source: Research Data, 2015

From the study, 63.6% own ships while 9.1% own specialized equipment. Shipping companies that own ships, specialized equipment and buildings was represented by 23.8%. Therefore most shipping company own ships as per the above result.

4.2.5 Capital Structure

Under demographics the study also sought to know the capital structure of these companies under survey. The respondent were required to tick appropriately the three option provided of fully equity, partly equity and debt and fully debt. The main goal was to understand how majority of these companies are owned. Result are captured in table 4.4 below.

Table 4.4 Capital structure

What is Capital Structure			
Type of structure	Frequency	Percent	Cumulative Percent
Fully Equity	14	63.7	63.7
Partly Equity and Debt	7	31.8	95.5
Fully debt	1	4.5	100
Total	22	100	

Source: Research Data,2015

The study revealed that 63.7% of the shipping companies were full equity capital while 31.8% were partly private and partly public and a small section of 4.5% were full debt capital. Therefore majority of shipping companies their source of capital is equity. Meaning they are financed by shareholders.

4.2.6 Operation in other countries

The researcher also sought to know if these companies operate in more than one country. The respondent were given a closed ended question to tick yes or no answer. The main purpose was to know is they are exposed to international environment which influence their dynamism.

All the 22 respondent responded that they operate in more than one country. These means that they face almost same environment in the course of their business. Therefore shipping is multinational business.

The research further sought to know how many countries these companies operate. Therefore the respondent s were given closed ended question which they

were to tick appropriately whether it is one country, 2 to 5 countries or more than 5 countries. The main aim was to establish how many companies operate in the international and global market. These influence the capabilities they require and how often they enhance them.

Table 4.5 Number of countries operating in

If Yes How Many Countries			Cumulative
Number of countries	Frequency	Percent	Percent
-Between 2 & 5 Countries	3	13.6	13.6
-More than 5 Countries	19	86.4	100
Total	22	100	

Source: Research Data, 2015

The study further revealed that 13.6% of the respondents operate in between 2 and 5 countries and 86.4% operate in more than 5 countries as shown in table 4.4 above. Therefore majority of shipping companies in Kenya operate in more than 5 countries globally.

4.3 Dynamic Capability

The researcher prepared a set of question to address the research objectives. Identifying the different capabilities that shipping companies deploy to improve performance and establish if they vary these capabilities to survive and perform better in the changing environment.

In the research analysis the researcher used a tool rating scale of 5 to 1; where 5 was the highest and 1 the lowest. Opinions given by the respondents were rated as follows, 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree and 1 = Strongly

Disagree. The analysis for mean, standard deviation and coefficient of variation were based on this rating scale.

4.3.1 Organizational Capability

The first objective of the study was to establish the different organizational capabilities that affect performance of the shipping industry in Kenya. Respondents were required to respond to set questions related to organizational capability and give their opinions. They were to respond on scale of 1 to 5 on the four capabilities provided by the researcher in the questionnaire. These capabilities were availability of fund, use of the right technology, trained staff and use internal and external R&D.

Table 4.6 Organisation Capabilities

Descriptive Statistics					
Capabilities	No	Min	Max	Mean	Std. Deviation
Availability of funds/capital	22	1	5	4.36	0.902
Use of right technology	22	1	5	4.18	0.907
Trained staff	22	1	5	4.32	0.894
Use of Internal and external R&D	22	1	5	3.95	1.133
Valid N (list wise)	22				

Source: Research Data,2015

As shown in table 4.6 above, the opinion that availability of funds and capital had a mean of 4.36 and standard deviation of 0.902 signifying a high agreement, the opinion that use of right technology had a mean score of 4.18 and standard deviation of 0.907 and opinion that trained staff had a mean score of 4.32 and standard deviation of 0.894 signifying a high level of agreement. The Opinion that use of internal and external R & D had a mean of 3.95 and standard deviation

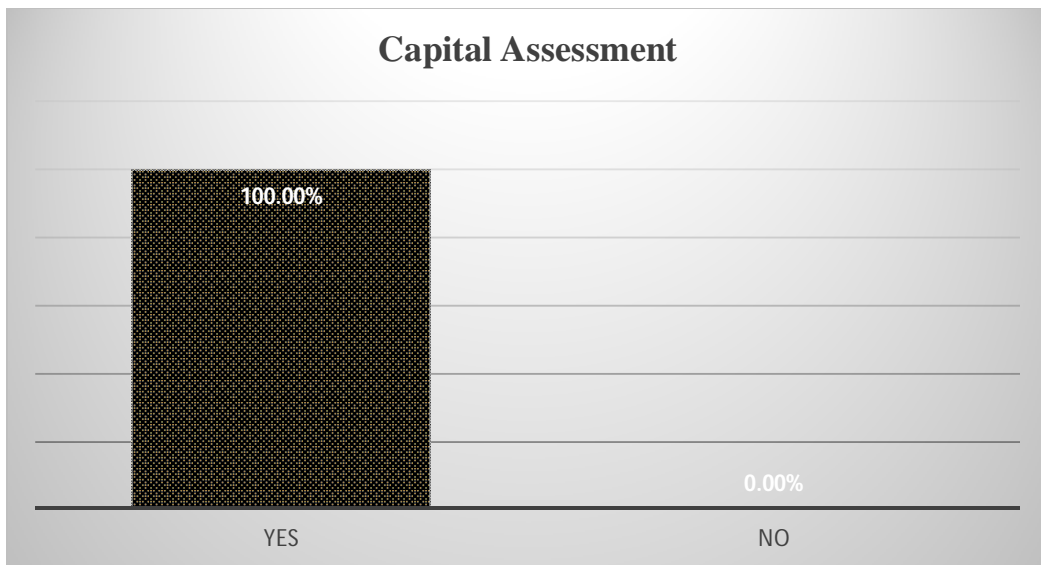
1.133. Therefore can be concluded that the four capabilities identified are relevant in improving shipping company performance.

4.3.2 Capability Dynamism

4.3.2.1 Capital

The researcher sought to know from the respondents if indeed they do carry out the capital need assessment. Researcher posed a yes or no answer to the respondents. The main aim was to identify whether these companies change their capital as per their needs to improve performance.

Figure 4.3: Is capital need assessment is conducted



Source: Research Data, 2015

The study revealed that all of respondents carry out capital assessments needs. Therefore can be concluded that almost all the shipping companies in Kenya do evaluate their capital need to improve performance. The study further revealed that after carrying out capital assessment needs, majority of the respondents either increase capital or decrease capital

The research also sought to know how often these changes in capital do take place for those who responded with yes. The respondents were given three options of yearly, every 3 years and after three to choose from by ticking appropriately. The main aim was to test the dynamism in capital capability in improving performance.

The results are shown in table 4.7 as below.

Table 4.7 Capital assessment needs frequency

How often do you carry out capital needs assessment			
Period	Frequency	Percentage	Cumulative Percent
Yearly	11	50	50
Every 3 Years	2	9.1	59.1
After 3 Years	9	40.9	100
Total	22	100	

Source: Research Data, 2015

The study revealed that 50% of the respondents carry out capital assessment yearly whereas 9.1% of the respondents carry out capital needs assessment every three years. 40.9% of the respondents carry out capital needs assessments after 3 years.

The researcher further sought to know if changes in the capital has improved performance by posing requiring the respondent to strongly disagree, disagree, be neutral or strongly agree. The respondent were required to tick the option accordingly. The main purpose was to establish whether dynamism in capital improve performance in the shipping industry in Kenya. The results are captured in table 4.8 below.

Table 4.8 Extent to which capital needs assessment has improved performance

Extent of agreement that the above has contributed to improved performance			
Options	Frequency	Percentage	Cumulative Percent
Strongly disagree	2	9.1	9.1
Disagree	1	4.5	13.6
Neutral agree	8	36.4	50
Strongly agree	11	50	100
Total	22	100	

Source: Research Data, 2015

50% of the respondents strongly agree that carrying out capital assessment needs has contributed to improved performance. While 36.4% were not sure whether changes in capital do improve performance. The rest disagreed that capital changes improve performance.

4.3.2.2 Training

Further the researcher through the questionnaire sought to know if these companies do conduct training need assessment for their staff. These was yes or no question where respondent were require to tick one of the options. The main purpose was to establish whether dynamism in staff training improve performance in the shipping industry in Kenya.

The results revealed that 77.3% conducted while 22.3% did not. Therefore majority do conduct training need assessments.

For those we conducted the assessment we require to confirm whether it was done based on performance. A yes or no question was given to them to respond accordingly. The main purpose was to confirm whether their training need are aimed at improving performance.

The results revealed that 54.5% conducted while 45.5% did not. Therefore majority do conduct training need assessments.

The study shows that 54.5% of the respondents carry out training needs assessments based on performance while 45.5% carry out training needs assessment but not based on performance.

Further the researcher sought to establish how often the training need is done by these companies. By posing question on the frequency, monthly, quarterly, semiannually and annually. The main goal was to check the dynamism in the particular capability. The result are captured in table 4.9

Table 4.9 Frequency of Training

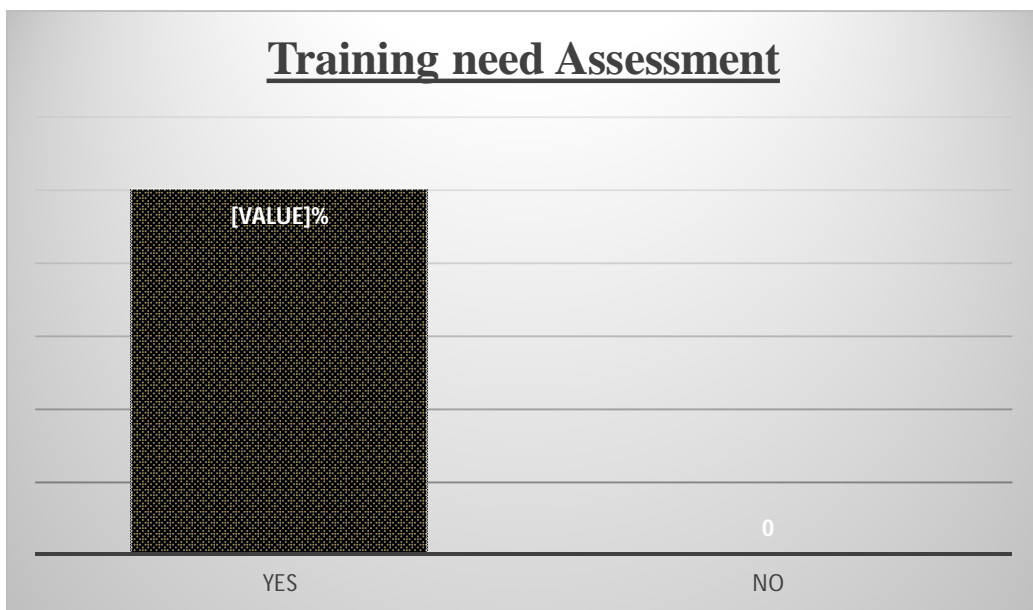
How often do you carry out training needs assessment?			
Options	Frequency	Percent	Cumulative Percent
Quarterly	13	59.1	61.9
Semi Annually	2	9.1	71.4
Annually	7	31.8	100
Total	22	100	

Source: Research Data, 2015

The study revealed that 59.1% of the respondents carry out training needs quarterly, 9.1% of the respondents carry out training needs semi-annually and 31.8% carry out training needs annually. Therefore majority carry out on quarterly basis.

The researcher further sought to know if changes in the training need has improved performance by posing requiring the respondent to strongly disagree, disagree, be neutral or strongly agree. The respondent were require to tick the option accordingly. The main purpose was to establish whether dynamism in training improve performance in the shipping industry in Kenya. Figure 4.3 show the result for this question

Figure 4.4 Training need assessment on performance



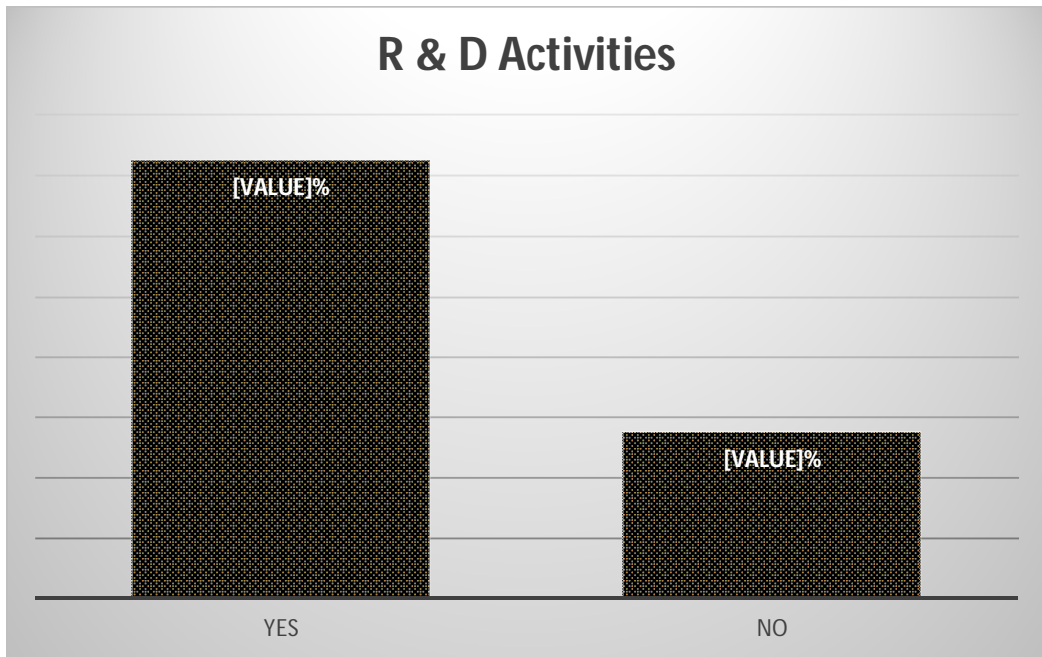
Source: Research Data, 2015

The results reveal that all respondent strongly do agree that changes in training improve performance. Therefore dynamism in skill of employee do improve performance in shipping industry.

4.3.2.3 R & D Activities

The respondent were also require to respond to question that sought to get their opinion whether dynamism internal and external R&D improve performance. They were required to respond do whether they carry out R&D or not by ticking a yes or no answers. The main purpose was to confirm whether shipping companies do undertake R&D activities. The result are shown in figure 4.4.

Figure 4.5 R&D Activities

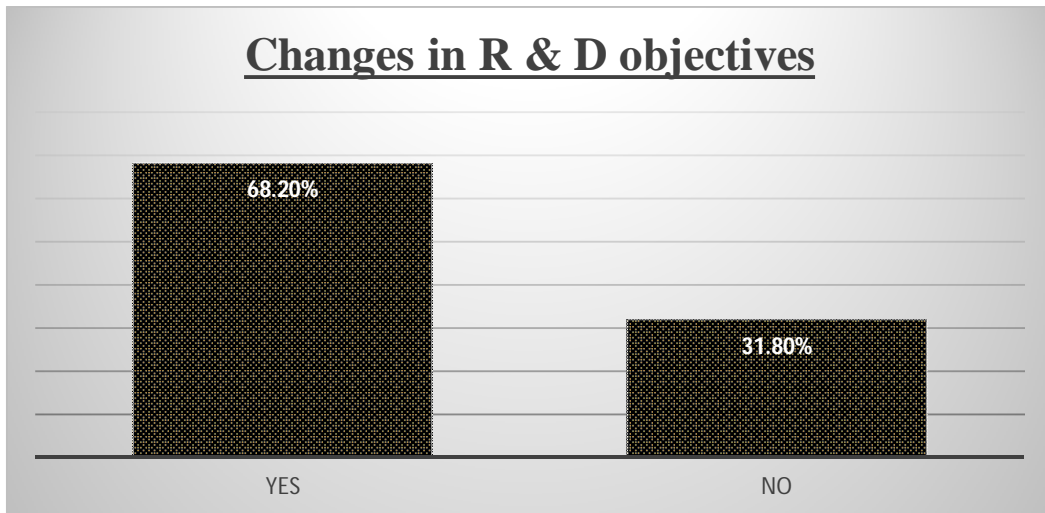


Source: Research Data

54.5% Of the respondents carry out R & D activities with 45.5% do not carry out R & D activities as shown in figure 4.3 above.

The researcher also sought to know if in the last 2 year these companies have changed their R&D objectives .The question was a yes or no to be ticked accordingly. The main purpose was to check the dynamism in the R&D activities. The result are per figure 4.5

Figure 4.6 Changes in R&D objectives in the last 2 year



Source: Research Data,2015

From figure 4.6 above 68.2% of the respondents have changed their R & D objectives in the last 2 years whereas 31.8% have not.

The study also sought to find out if the respondent agree or disagree that changes in R&D objective improve performance. Question requiring the respondent to disagree, be neutral of strongly agree were given to the respondent. The purpose was to confirm if dynamism in R&D improve performance. The result are as per Figure 4.6

Table 4.10 Extent of agreement to performance

To what extent do agree that the above has contributed to improved performance?

Option	Frequency	Percent	Cumulative Percent
Disagree	3	13.6	13.6
Neutral agree	2	9.1	22.7
Strongly agree	17	77.3	100

Total	22	100
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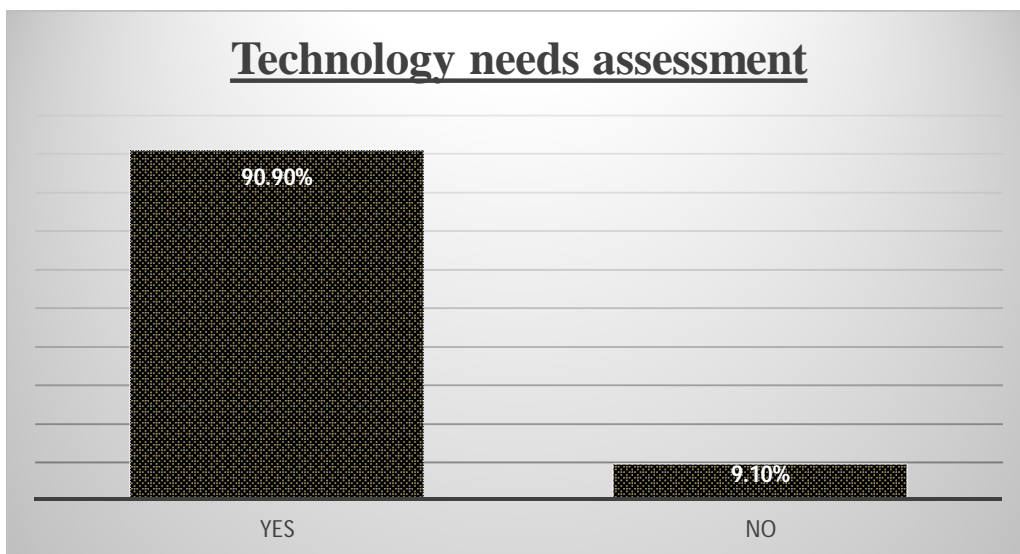
Source: Research Data,2015

From table 4.8 above the study revealed that 77.3% of the respondents strongly agree that R & D has contributed to improved performance while 13.6% do not the rest were not sure.

4.3.2.4 Technology

The study also sought to find out if the respondent companies assess their technological need. Yes or no question was posed to them to tick appropriately. This was to confirm whether the shipping companies consciously assess their technological needs. The result are as per Figure 4.6 .

Figure 4.7: Technology needs assessment



Source: Research Data, 2015

The result reveals that 90.9% of the respondents assess their technological needs and 9.1% of the respondents do not do so.

The study further sought to find out if these companies have changed their technology in the last 2 years. Question requiring the respondent to to tick if they

have done it once, twice, thrice or more than thrice. The main aim was to confirm if there is dynamism in this particular capability. The result are shown in table 4.9.

Table 4.11 Times technology needs changed

In the last 2 years how many times have you changed your technology?

Option	Frequency	Percent	Cumulative Percent
Once	6	27.3	27.3
Twice	5	22.7	50
Thrice	9	40.9	90.9
More than Thrice	2	9.1	100
Total	22	100	

Source: Research Data,2015

From table 4.11 above 40.9% of the respondents do technological need assessment thrice, 9.1% more than thrice, once and twice was 27.3% and 22.7% respectively.

Study also sought to find out if changes in technology has an impact on performance. The respondent were required to strongly disagree, be neutral or strongly agree. The aim was to confirm if dynamism in technology improve performance in the shipping companies. Result captured in table 4.10.

Table 4.12 Extent to which technology has improved performance

To what extent do agree that the above has contributed to improved performance?

Option	Frequency	Percent	Cumulative Percent
Strongly disagree	1	4.5	4.5
Neutral agree	8	36.4	40.9
Strongly agree	13	59.1	100
Total	22	100	

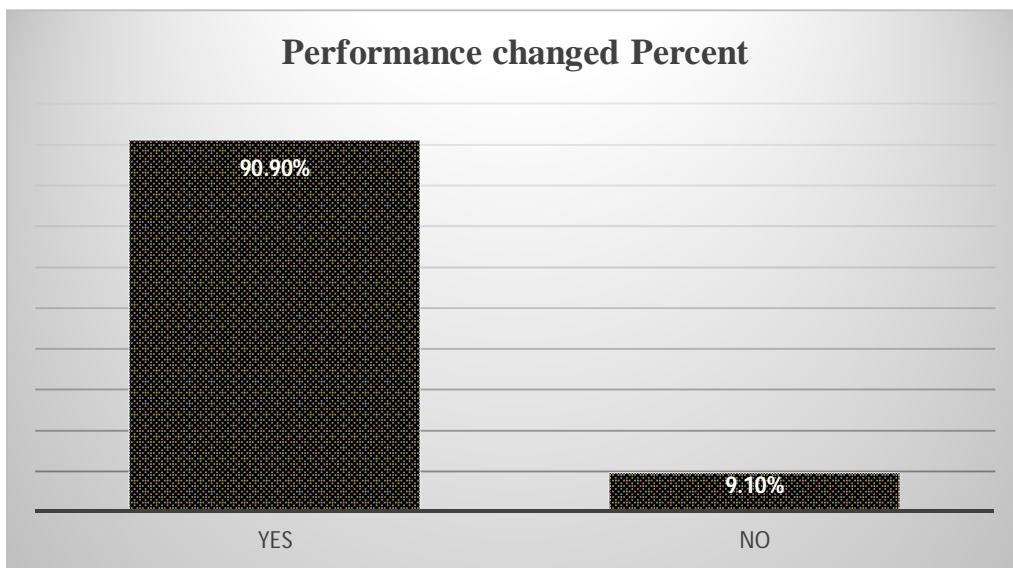
Source: Research Data,2015

59.1% strongly agree that carrying out technological needs assessment has contributed to improved performance, 36.4% were neutral and 4.5% strongly disagreed

4.4 Performance

The study sought to also confirm if performance has improved in the last 5 years. A yes or no question was given to respondents. The purpose was to confirm whether the above dynamism has an impact the performance of these shipping companies. Result shown in the figure 4.8.

Figure 4.8 Change in Performance in the last 5 years



Source: Research Data,2015

90.9% of the respondents revealed that there has been increased performance in the last 5 years where a small 9.1% has recorded a decrease in performance in the last 5 years.

Study also sought to find out which measure are used for performance. The respondent was given an option to tick TEUs, weight or volumes. The aim was confirm the industry measure of performance. Result shown in table 4.11.

Table 4.13 Performance in Teus, Weight & Volume

Option	Frequency	Percent	Cumulative
			Percent
Teus	17	77.3	77.3
Weight	2	9.1	86.4
Volume	3	13.6	100
Total	22	100	

Source: Research Data,2015

Table 4.13 reveals that majority performance was in Teus standing at 77.3%, weight 9.1% and volume was 13.6%

Also sought to know performance of sales in Kenya shilling for the last 2 year. Respondent given question to tick for year 2013 0 to 200 million, 201 to 500 million, 501to 1 billion and over 1 billion. Same also for year 2014.The aim was to confirm trend within the two years. Result shown if table 4.12 below.

Table 4.14 Sales performance in the last 2 years

	2013	2014	Difference
0-200M	40.9	41.0	0.2
201M-500M	36.4	36.1	(0.3)
501-1B	9.1	9.2	0.7
Over 1B	13.6	13.7	0.3
Total	100.0	100.0	0.9

Source: Research Data, 2015

The study revealed that there was improvement in sales in year 2014 as compared to year 2013 by 0.09%. This could be attributed to the dynamism in the company's capabilities.

4.5 Correlation Analysis

To establish the relationship between the independent variables and the dependent variable the study conducted correlation analysis which involved coefficient of correlation and coefficient of determination.

4.5.1 Coefficient of Correlation

In trying to show the relationship between the study variables and their findings, the study used the Karl Pearson's coefficient of correlation (r). This is shown in table 4.24 below. The relationship between organizational capability and performance was 0.768 and relationship between capability dynamism and performance was 0.880. This showed a strong positive relationship between the independent variables and dependent variable.

Table 4.24 Pearson Correlation

Table 4. 15:Pearson Correlation

	Performance	Organisation Capability	Capability Dynamism
Performance	1		
Organisation Capability	0.768	1	
Capability Dynamism	0.88	0.082	1

Source: Research Data, 2015

4.5.2 Coefficient of Determination (R^2)

Table 4.25 showed that the coefficient of determination was 0.947. Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (Performance) that is explained by all independent variables. From the findings this meant that 94.7% of performance is attributed to combination of the two independent factors investigated in this study. Result captured in table 4.16

Table 4.16 Coefficient of Determination (R^2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.973 ^a	.947	.943	.190

Source: Research Data, 2015

4.5.3 Regression Analysis

The study used ANOVA to establish the significance of the regression model. The significance value is 0.022 which was less than 0.05 thus the model is statistically significance in predicting how organizations capability and capability dynamism affect performance in the shipping industry. This therefore means that the regression model had a confidence level of above 95% hence high reliability of the results obtained. Result shown in table 4.17

Table 4.17 ANOVA

<u>ANOVA^a</u>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.822	2	6.921	3.762	.022 ^b
	Residual	33.111	18	1.840		
	Total	46.952	20			

Source: Research Data, 2015

a. Dependent Variable: Performance

b. Predictors: (Constant), Organizational Capability, Capability Dynamism

4.5.4 Multiple Regression

The researcher conducted a multiple regression analysis as shown in Table 4.26 so as to determine the relationship between performance and the two variables investigated in this study.

Table 4.18 multiple regression

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.830	4.658		1.745	.098
Capability Dynamism	.222	.107	.412	2.072	.053
Organizational Capability	.353	.180	.389	1.961	.066

Source: Research Data,2015

The regression model was

$$\text{Regression} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

a. Dependent Variable: Performance

Where Y = Performance

X₁ = Organizational Capabilities

X₂ = Capability dynamism

$$Y = 0.830 + .222X_1 + .353X_2$$

The regression equation above has established that taking all factors into account (Performance as a result of organizational capability and dynamic capability) constant at zero at performance among shipping industry was 0.830 The findings presented also shows that taking all other independent variables at zero, a unit increase in organizational capability will lead to a 0.222 increase in the scores of performance among shipping industry; a unit increase in capability dynamic will lead to a 0.353 increase in performance among shipping industry. This therefore implies that all the two variables have a positive relationship with performance.

4.6 Discussion of Findings

Out of the target population of 30 respondents, 22 usable questionnaires were received and analyzed, indicating a response rate of 73.3%. This study analyzed 25 factors pertaining to the relationship between dynamic capability and performance in the shipping industry in Kenya.

The study shows that the relationship between dynamic capability and performance in the shipping industry is influenced by capital, staff expertise, technology and R & D. These findings are supported by studies on dynamic capability and performance (Helfat & Peteraf, 2003, Helfat *et al.*, 2007, Porter, 1998).

The dynamic capability approaches adopted by the shipping industry have a direct linear relationship on performance of the shipping industry (Winter, 2003, Zott, 2003). Knowledge management, the process of research and development for new areas to venture in and strategic decision making (Grant, 1996, Conner & Prahalad, 1996) in knowledge base theory where firms are viewed as bundles of knowledge that serve as a source of differentiation and competitive advantage.

The findings further show that an approach based on dynamic capabilities endows the basic RBV perspective with a more dynamic nature which emphasizes the strategic value of higher order resources (dynamic capabilities) allowing the generation of and renewal of core competences and competitive advantage (organizational learning process). Teece, Pisano and Shuen emphasize the key role of managers in appropriately adapting, integrating and reshaping organizational skills and resources as well as internal and external functional competences.

Organizations control resources and capabilities that may have become valuable sources of competitive advantage; however, once organizations face environmental turbulence, the need for reconfiguration of the resource base arises. According to Langlois (1997), even the most integrated firm cannot possess all resources and capabilities necessary for all activities. Therefore, organizations need to link up with other firms; especially when innovation is involved, links among organizations get very complex.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter provides the summary of the findings from chapter four, and it also gives the conclusions and recommendations of the study based on the objectives of the study. The chapter finally presents the limitations of the study and suggestions for further studies and research.

5.2 Summary

The study had a response rate of 73.3% which is considered sufficient for analysis. The findings of the pilot study showed overall Cronbach's alpha was 0.752 that exceeded the prescribed threshold of 0.7 (Mugenda&Mugenda, 2003). From the study majority of the shipping companies (68.2%) have been in operation for more than 20 years and 86.4% operate in other countries. 72.7% of the shipping companies are fully privately owned and 54.5% of the shipping companies have between 50 and 100 employees. This study analyzed 25 factors pertaining to the relationship between dynamic capability and performance in the shipping industry in Kenya. The study shows that the relationship between dynamic capability and performance in the shipping industry is influenced by capital, staff expertise, technology and R & D.

This study has revealed that the dynamic capabilities positively influence the firm profit and thus performance. Sensing capabilities are useful in identification and assessment of an opportunity within firm's environment. They involves exploring technological

opportunities, probing markets, and listening to customers, along with scanning the other elements of the business ecosystem. Seizing dynamic capabilities help in mobilization of resources to address an opportunity and to capture value. These capabilities include designing business models to satisfy customers and capture value. They also include securing access to capital and the necessary human resource (Teece, 2007). Transforming dynamic capabilities are important for continued renewal and are needed when radical new opportunities are to be addressed. Also they are needed periodically to soften the rigidities that develop over time from asset accumulation, standard operating procedures, and insider misappropriation of rent streams (Teece, 2007). Managerial capabilities orchestrate the rest and coordinates on adoption, change and proper actions.

The opinion availability of funds and capital has a high agreement of contributing to organizational capability that improves performance with a mean of 4.43 and standard deviation of 0.817. Use of right technology, trained staff, use of internal and external R & D all have a mean score of over 4 and a standard deviation of over 0.8 signifying a high agreement level.

The study revealed that all shipping companies carry out capital assessment needs and that they either increase or decrease capital as per the needs analysis. The study further revealed that capital assessment needs improves performance in the shipping industry. 68.2% of the shipping companies carry out R & D activities and these activities improve performance in the shipping industry. Further, the study revealed that 54.5% of shipping companies carry out training needs assessment and these trainings are done quarterly standing at 61.9%. These training improve performance in shipping industry. 90.9% of the shipping companies carry out technology assessment needs and 40.9% change their technology every three times in a year.

The study further revealed that 90.9% of the shipping companies have had improved performance in the last 5 years in terms of both Teus and profitability. There is a strong positive Karl Pearson correlation of 0.768 and 0.880 organizational capabilities and capability dynamism respectively.

5.3 Conclusion

The study concluded that there is a relationship between dynamic capability and performance in the shipping industry. Organizational capability and dynamic capabilities had a positive correlation with the dependent variable.

Capital assessment needs, training needs assessment, R & D activities and technological assessment needs are the dynamic capabilities that are key in improving performance in the shipping industry in Kenya. The study shows that the dynamic capabilities influence firm performance positively and thus any firm that fails to embrace them may not survive in the dynamic market environment.

5.4 Recommendation

The study recommended the following:

1. That shipping companies in Kenya should adopt and adhere to dynamic capabilities
2. That shipping companies in Kenya should increase R & D activities so as to realize improved performance
3. That capital assessment needs should be carried out frequently so as to be able to achieve improved performance.

5.5 Suggestion for further studies

This research presents a relationship between the dynamic capabilities and performance. It has been shown that dynamic capabilities have both direct and indirect effects on performance: directly via dynamic capability costs and indirectly via the organisational resource base. Furthermore, the marketing strategic orientation has several impacts on the dynamic capabilities – performance relationship. It influences the development of dynamic capabilities. Furthermore, it decides on the timing of dynamic capability utilization.

The researcher proposes that a study be conducted to determine the extent of application of dynamic capabilities affect the expansion of shipping industry in Kenya. A research

can be done to establish the relationship between the application of dynamic capabilities and organizational effectiveness.

5.6 Limitation of the Study

The respondents took a lot of time in filling in the questionnaires therefore the researcher had to collect the already filled questionnaires to do the analysis because of the time constraints. This made the response rate not to be 100% as expected. Further a major limitation was the unwillingness of the respondents to objectively articulate the situation of the shipping company due to fear that information could be used for competitive advantage by their rival.

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APPENDICES

Appendix I: Letter of Introduction

3rd August 2015

Dear Respondent,

I am a postgraduate student at the School of Business, University of Nairobi, currently carrying out a research titled **THE RELATIONSHIP BETWEEN DYNAMIC CAPABILITY AND PERFORMANCE IN SHIPPING INDUSTRY IN KENYA**. This is in partial fulfillment to the award of master of business administration degree.

You have been selected as one of the respondents in this study. I therefore request you to kindly facilitate the collection of the required data by answering the question herein.

This interview is purely for academic purposes and the data collected will be treated with utmost confidentiality. A copy of the completed project report shall be availed to you upon request.

Your assistance and cooperation will be highly appreciated. Thank you in advance.

Yours faithfully,

Edwin Were -----Student (0724, 903652)

Dr. Jackson Maalu----- Research Supervisor

Appendix II: Questionnaire

The information provided here will be used solely for academic purposes and will be treated with maximum confidentiality.

Instructions

Please answer these questions to the best of your knowledge. Write your response in the space provided. Please put a tick (✓) where appropriate.

PART A: Demographic Information

1. How many employees does your shipping company have?

2. How long has your shipping company been in operation?

- a) Less than five year []
- b) 5 to 10 years []
- c) 10 to 15 years []
- d) 15 to 20 years []
- e) More than 20 years []

3. What is the ownership structure of your shipping company?

- a) Fully private []
- b) Partly private and partly public []
- c) Public limited company []
- d) Listed on securities exchange []
- e) Multi-National company []

4. Which of the following assets does your shipping company own?

- a) Building and property []
- b) Ships []
- c) Specialized equipment []

5. What is your capital structure?

- a) Full equity capital []
- b) Partly equity and partly debt []
- c) Full debt Capital []

6(a) Do you operate in other countries Yes [] No []

b). If yes, how many countries

- i) One country []
- ii) 2 to 5 countries []
- iii) More than 5 Countries []

PART B: ORGANIZATION CAPABILITY

To what extent do you agree that the following capability elements contribute to your companies improved performance? Rate these factors on a scale of 1-5 (1-Strongly Disagree, 2-Disagree, 3-Neutral, 4 Agree, 5 strongly Agree)

Organization Capability	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Availability of funds/capital					
Use of right technology					
Trained staff					
Use of Internal and external R&D					

PART C: CAPABILITY DYNAMISM

- C 1 (i). Do you carry out capital needs assessment? Yes [] No []
(ii). If yes, do you increase or decrease as per the need? Yes [] No []
(iii). How often do you carry out capital needs assessment?
Yearly [] every 3 years [] after more 3 years []
(iv) To what extent do agree that the above has contributed to improved performance?
Strongly disagree [] Disagree [] Neutral Agree [] strongly agree []

- C2 (i). Do you conduct training needs assessment? Yes [] No []
(ii). Are your training needs assessment based on performance Yes [] No []
(iii). How often do you train your staff based on training needs assessment?
Monthly [] Quarterly [] Semi Annually [] Annually []
(iv) How does your company deal with new skill requirement?.....

- (v) To what extent do agree that the above has contributed to improved performance?
Strongly disagree [] Disagree [] Neutral Agree [] strongly agree []

- C3 (i). Do you carry out R & D activities? Yes [] No []
(ii). If Yes what kind of R & D?

- (iii)What proportion of your budget do you invest in R & D?
(iv) Have you changed your R & D objectives in the last 2 years? Yes [] No []
(v) To what extent do agree that the above has contributed to improved performance?
Strongly disagree [] Disagree [] Neutral Agree [] strongly agree []

- C4 (i). Do you assess your technological needs in your company? Yes [] No []
(ii). Based on your results in C4 (i) above, do you change or acquire new

Technology?

(iii).In the last 2 years how many times have you changed your technology?

Once [] Twice [] Thrice [] More than Thrice []

(iv) To what extent do agree that the above has contributed to improved performance?

Strongly disagree [] Disagree [] Neutral Agree [] strongly agree []

PART D: PERFORMANCE

D1 (i) has there been an increase or decrease in performance for last 5 years Yes[]No[]

(ii)If yes explain.....

.....
D2 (i) what has been your performance from January to June 2015 in terms

a)TEUs..... b)Weight.....c) Volume.....

(ii) What has been your performance in terms of sales (KES Millions) for last 2 years?

Year 2013 0-200M [] 201M-500M [] 501M-1B [] Over 1B []

Year 2014 0-200M [] 201M-500M [] 501M-1B [] Over 1B []

Appendix III: List of shipping line in Kenya

	NAME OF COMPANY	TYPE OF BUSINESS	NATIONALITY
1	BLPL Logistics	Shipping Line	
2	Caravel Logistics Pvt Limited	Shipping Line	INDIAN
3	CMA CGM Line	Shipping Line	FRENCH
4	CONTI Line	Shipping Line	
5	Cosco Container Lines (COSCON)	Shipping Line	CHINESE
6	ECU Line	Shipping Line	
7	Emirates Shipping Line DMCEST	Shipping Line	EMIRATI
8	Emkay Lines Pvt. Limited	Shipping Line	MAURITIUS
9	Eukor Car Carriers Inc. (EUKOR)	Shipping Line	KOREAN
10	Evergreen Marine (Singapore) Pte. Ltd.	Shipping Line	SINGAPORE
11	Hanjin Shipping Company	Shipping Line	SINGAPORE
12	Hoegh Autoliners	Shipping Line	
13	Hyundai Glovis Company	Shipping Line	PANAMA
14	Hyundai Merchant Marine Company	Shipping Line	KOREAN
15	Ignazio Messina & C. S.p.A.	Shipping Line	ITALIAN
16	Kenya National Shipping Line (KNSL)	Shipping Line	KENYAN
17	Maersk Line	Shipping Line	DANISH
18	Mediterranean Shipping Company (MSC)	Shipping Line	SWISS
19	Mitsui OSK Lines (MOL)	Shipping Line	JAPANESE
20	Nippon Yusen Kaisha (NYK) Line	Shipping Line	JAPANESE
21	Orient Overseas Container Line (OOCL)	Shipping Line	
22	Pacific International Lines (PIL)	Shipping Line	SINGAPORE
23	Perma Shipping Line PTE Ltd	Shipping Line	
24	Safmarine Container Lines N.V	Shipping Line	DANISH
25	Sarjak Container Lines	Shipping Line	INDIAN
26	Sea Consortium Private Limited (SEACON)	Shipping Line	SINGAPORE
27	Simatech Shipping & Forwarding LLC	Shipping Line	
28	United Africa Feeder Line (UAFL)	Shipping Line	MAURITIUS
29	WAN HAI Lines	Shipping Line	
30	WEC Lines B.V. (WEC)	Shipping Line	NETHERLANDS