INFLUENCE OF ORGANIZATION STRUCTURE ON ORGANIZATIONAL LEARNING IN PRIVATE HOSPITALS IN NAIROBI AND MOMBASA COUNTIES, KENYA

BY

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DECLARATION

This project is my original work and has not been presented for a degree in any other university.

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This research project has been submitted for review with my approval as University supervisor.

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DEDICATION

To my parents Charles and Eunita Opiyo.

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ABSTRACT

This study was aimed at determining the influence of organizational structure on organizational learning in Private Hospitals in Nairobi and Mombasa Counties. To accomplish the research objective, the study employed the use of cross-sectional research design to investigate the relationship between organizational structure and learning. The target population consisted of 88 private hospitals picked through convenience sampling based on Cochran formula on sample size. The study's primary data was collected using structured combined Robin's and DLOQ (Dimensions of Learning Organization Questionnaire) questionnaire. The data was collected from professionals within the middle level of management which included members of at least ten professions who were each handed a questionnaire collectable in a week's time. The data collected was analyzed using regression, descriptive and correlation analysis. The study determined that there existed a strong positive correlation between complexity and specialization on organizational learning. It was established that centralization and formality had a strong but negative correlation to organization learning. The study also realized that the most practiced dimension of organization learning was continuous learning and the other forms like inquiry and dialogue were scoring lower in comparison. Therefore, the study recommended that private hospitals should move focus to other dimensions of organizational learning. The study further suggested that in order to further learning private hospitals needed to reduce levels of formality and centralization while improving on specialization and complexity of work. The study proposed that further studies should be done on public hospitals to learn the corresponding impact on learning in Kenya. In addition, the study also suggested other factors that may affect organizational learning like culture to be investigated.

LIST OF ABBREVIATIONS AND ACRONYMS

ANOVA – Analysis of Variance

CKO – Chief Knowledge Officer

CT-SCAN – Computed Tomography Scan

DLOQ – Dimensions of Learning Organization Questionnaire

MRI – Magnetic Resonance Imaging

SPSS – Statistical Package for Social Science

UHC – Universal Health Care

WHO – World Health Organization

CHAPTER ONE: INTRODUCTION

1.1. Background of the Study

Research works on organizational learning have to a great extent been expanded to get more insight in this relatively new phenomenon. Learning is a very dynamic concept and is theoretically used to depict the continuously changing nature of an organization (Dodson, 1993). Thus, the area of organizational learning has been characterized by a myriad of concepts and definitions which were used to examine organizational learning. Some of the concepts and perspective of organizational learning have been highlighted on by Bontis et al. (2002) and Templeton et al. (2002). In the works of Fiol and Lyes (2007), they believed that organizational learning is determined by organizational structure. According to Bapuji and Crossan (2004) organizational structure plays a major role in developing a learning process. Garvin (1996) states that the characteristics of an organization's structure determines the levels of innovations and productivity in the said organization.

This study was anchored on three theories. Namely, administrative behavior theory, structuration theory and organizational learning theory. Administrative theory was coined by Herbert (1947). He stated that in reality the decision maker cannot consider all aspects of a decision and thus chooses to go for the easiest combination that can yield desired results (Warren, 2019). Secondly, structuration theory developed by Anthony Giddens which states that structure within an organization is as much a creation of the internal members of the organization as it is of external members. (Esslinger, 2009). Lastly, learning organization theory draws attention to learning across the whole organization. It stresses the importance of organizational adaptability, flexibility, conscientious approach and responsiveness to change (Senge, 2009).

Private hospitals in Kenya have a set of three major structures followed in their operation. These structures include functional, matrix and service line structures (Reich et al., 2008). Unlike public hospitals, private hospitals have more adherence to structure within their operations and less interference from third parties like the government. Thus, they form a stable environment to study different forms of structure. Secondly, private hospitals in Kenya have a wealth of knowledge supplied from both private and public sector. This is possible due to the government initiative of permitting health workers to establish private practices alongside their public works. Private hospitals harbor a wealth of professionals from various fields whose work is highly knowledge based. These individuals include doctor, nurses, administrators, dentists among other professionals who interact daily (Kenya Medical Directory, 2018). Therefore, this research determined if the structure implemented by private hospitals affected learning in private hospitals.

1.1.1. Organization Structure

According to O'Neill et al. (2001) organization structure is the degree of formalization of rules, communication, authority and compensation, centralization in decision making, standardization of work skills and processes control of results by accepting only adequate outcome. According to Fiol and Lyles (2007), decentralized and centralized forms of organizational structures play an important role in the learning process of an organization. However, in the past there has been no substantive empirical works to prove this relationship. Robin (2006) stated that the organizational structure can be measured in relation to formality, complexity (including specialization) and degree of centralization. Thus, organization structure measurement in this study was done using modified Robin's standard questionnaire.

In the works of Trott (2008), many researchers believed that organic structure encourages innovation in the organization unlike mechanistic structures. As a field it is quite difficult to establish the right levels of organic and mechanistic structures to apply. Though organic structure encourages learning, mechanistic structure on the other hand is programmable. It just so happens that both of these structures are applied in private hospital (Boblitz & Thompson, 2005). Therefore, determining a common ground between the two in relation to organizational learning was highlighted and researched in this project in relation to private hospitals in the Nairobi and Mombasa counties (Schminke, 2002).

1.1.2. Organization Learning

The term learning organization was coined by Garrett in the year 1987 (Ortenblad, 2004) and later popularized by Peter Senge in his book The Fifth Discipline published in 1990 (Sun & Scott, 2003). Learning organization is an institution skilled at creating, transferring and acquiring knowledge and at adapting its behavior to reflect new insights and knowledge. The term organization learning and learning organization are used interchangeably and the main difference is that the former is descriptive and the latter is prescriptive. Thus, organizational learning was suitably measured as a dependent variable (Ortenblad, 2004).

In any work environment, employees get to learn incidentally, unconsciously and informally during execution of their task (Yang et al., 2004). Organizational learning is currently viewed as routines within an organization. These routines serve as knowledge and learning occurs only when this knowledge is conceptualized and updated with experience (Levitt & March, 1998).

According to Yang et al. (2004), in order to capture the empirical value of organizational learning, the research employed the use of DLOQ (Dimensions of Learning Organization Questionnaire). The research measured the levels of organizational learning that existed in private hospitals in Nairobi and Mombasa counties. Data collected was analyzed using SPSS (Statistical Package for the Social Sciences) software to show significance of relations existing between organizational structure and organizational learning.

1.1.3. Private Hospitals in Kenya

In the past 20 years Kenya's private health sector has grown quite significantly outshining all other countries in the sub-Saharan region. Some of the factors that have contributed to this growth include: the government initiative to allow public health officials to establish private practices, reform in health sector that eased the licensing of private practice and the introduction of patient user fee in public facilities (World Bank Group, 2015).

Approximately forty seven percent of the poor quintile of Kenya's population will go to commercial private healthcare. This numbers cater for over two-thirds of the expenditure in private sectors in Kenya. Having taken all the above into account therefore private health care in Kenya is quite a significant player economically and any factor affecting its execution needed to be looked into by a third eye. One of these factors is organizational learning as was investigated in this research project. This study was conducted on private hospitals in the Nairobi and Mombasa Counties. According to Kenya Medical Directory (2018), these two regions consisted of more than forty four percent of the country's private hospitals totaling one hundred and eighty-five hospitals out of four hundred and thirteen in Kenya.

The format of organization structure common in health organization in Kenya is the functional organization structure. The structure is pyramid like and consists of functions in each level. The functions within the levels are all assigned to managers who ensure their performance. The kind of structure adopted by a health institution depends highly on the size and complexity of the organization. A large institution like an academic medical center, community hospital or a hospital system will implement a deep vertical form of structure to accomplish the different administrative controls from the top level to the bottom level. This structure is necessitated by the fact that such institutions have a wider scope of services offered and these services also require a wider array of administrative and support services. It's a structure characterized by strict reporting line and chain of command. Functional structure maybe rigid, but it offers other advantages like accountability, clear reporting lines and very specific division of labor. Other structure adopted by healthcare institutions are usually used in combination with functional structure and they include team-based or matrix model and service line management (Reich et al., 2008).

The reasoning behind matrix model is that organizations may be limited by a functional structure due to the need for a combination of skills to achieve certain objectives and flexibility of work environment. An excellent example of matrix model is when personnel from rehabilitation and nursing are assigned to geriatrics and thus needing them to report directly to the head of geriatrics unit. Another good example is when administrations staff together with the clinical staff are assigned the duty of evaluating a new business model. In both scenarios the managers get to lead staff who are not directly under their

administrative control. On the plus side this structure has better coordination and communication of services as well as pooling of knowledge (Siddiqi et al., 2005).

The service line management model requires a manger to be placed at the head of every clinical service line. The said manager will be accountable for resource acquisition, financial control, staffing and budgeting associated with the types of services offered under the service line. Typical service line models include oncology (cancer), physical rehabilitation, women's services, mental health (behavioral health) and cardiology. This model can be implemented within one organization or may be used across affiliated institutions taking an example of a hospital system where a stream of related services is offered at several dissimilar affiliated facilities (Boblitz & Thompson, 2005). Some institution facilities have come to realize benefits of service line models. These benefits include higher quality in care, better patient satisfaction and lowered cost of operation among other benefits. Service line model is usually implemented in addition to functional structure. The difference comes in terms of emphasis given to the service lines within any healthcare facility (Duffy & Lemieux, 1995).

1.2. Research Problem

The kind of organization structure adopted by an institution has an influence on an organizations ability to adapt to change. It can either increase or decrease an organizations ability to create and innovate new solutions, to learn or add value. The organization structure of a firm affects its ability to obtain new knowledge, identify its knowledge base and the integration of the same knowledge to its system to boost its learning ability (Martinez et al., 2011).

Many middle- and low-income countries like Kenya have weak and fragile health systems, lacking the much-needed capacity to put expertise into practice and widen health service delivery. The market share of private healthcare in Kenya stands at three quarter of all private sector spending. However, annual rate of growth in private healthcare has progressively declined in the past by 5.2% in 2008, 3.5% in 2009, 2.3% in 2010 and 1.7% in 2011 (World Bank Group, 2015). This has been attributed to centralized decision making, inefficient utilization of resources, inequitable management information systems, inadequate management skills at all levels, outdated health laws, worsening poverty levels, rapid population growth and increasing burden of disease. These difficulties can be overcome by proper knowledge-translation within private healthcare. Private hospital systems are complex, occasionally chaotic, busy and under constant pressure from health care analysts, funders and policy makers to come up with efficient organization structures which ensures communication, survival and adaptation to changing knowledge environment.

A study conducted on the Turkish Automotive research and development companies yielded the following observations; professionals within the organization perceived a positive effect of specialization and a negative effect of formalization and centralization on learning in their organizations. The relation of the variables was significant with levels of over 0.01 and above. Centralization had a very high negative correlation coefficient to learning followed by formalization and lastly specialization gave a positive correlation to learning. These results imply that specialization is highly rooted on knowledge unlike the other two dimensions of organization structure (Ulku & Resit, 2015).

According to Mehrdad et al. (2013), there existed a significant negative correlation coefficient between organization structure and learning in an organization setup. Their study was conducted on education organizations in Boroojerd County, Iran. They realized that shared vision and team learning were the areas of organization learning highly affected by organization structure in comparison to the rest. Armstrong and Foley (2003) in their work noted that there are certain facets of an organization that were necessary to nature organizational learning. These facets included organizational culture and structure.

Though there are numerous researches on learning organization and its implementation, these works were mainly done in the high-income economies like Turkey and Iran (Mehrdad et al., 2013). Less was known of learning organization in relation to medium and low-income countries and factors affecting it like Kenya. It had also been observed through studies that various industries' learning capabilities were affected by structure differently. This was evident through the automotive industry in Turkey and education industry in Iran (Ulku & Resit, 2015). Therefore, the study aimed at answering the following research question: What was the influence of organizational structure on organizational learning of private hospitals in Nairobi and Mombasa counties, Kenya?

1.3. Research Objective

To determine the influence of organizational structure on the organizational learning of private hospitals in the Nairobi and Mombasa Counties.

1.4. Value of the Study

This research would be valuable to academicians and researchers in the future because it was to act as a source of both conceptual and empirical information in regard to organizational learning. It would also help in validating and refining future findings. In the

past there had been little empirical data on the relationship that existed between organizational structure and levels of organizational learning (Fiol & Lyles, 2007). Therefore, this research was intended to provide more empirical data to bring out strongly the relation that may or may not have existed between organizational structure and organizational learning.

The project would enable policy makers in healthcare organizations to get better understanding of their organization structure and its effect on organizational learning. Therefore, with such information at hand healthcare administrators would make better organizational policies.

The research would be important to government and quasi-government organizations in line with the current restructuring ongoing in the public sector towards achievement of vision 2030 and guidelines of the new constitution. Thus, improve management of healthcare and move it a step closer to realizing the president's big four agendas among them Universal Health Care (UHC) (Kenya Medical Directory, 2018).

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

This chapter entails theoretical and empirical review of the research. It draws comparison of various researches and studies done in relation to organization structure and learning.

2.2. Theoretical Foundation of the Study

This research was anchored on administrative behavior theory by Herbert Simon, structuration theory by Anthony Giddens and organizational learning theory by Peter Senge.

2.2.1. Administrative Behavior Theory

The theory was coined by Herbert Simon in the 1940s. In his work Herbert challenged the previous works of Savage who theorized that human decisions could be made with ideal rationality. He believed that the concept of economist which emphasized utility maximization was misguided. Though it had formed the basis for coming up with bounded rationality it had depicted an ideal situation that was nonexistent. In the real world one cannot consider all aspects and come up with a perfect combination that suits all scenarios (Warren, 2019).

Decisions are made within bounded rationale. These boundaries are the levels of performance deemed satisfactory for the management. Thus, he came up with the satisficing model of administrative behavior. He believed that every organization structure will be modelled to meet only the desired levels of performance based on the firm's objectives. Once these set of objectives are achieved and newer goals set, the system could be improved further to a more satisfying state. Thus, an equilibrium can never be reached

but with continued experience and application of organization decisions new models will emerge to suit each and every scenario satisfactorily (Warren, 2019).

Simon criticized the common administrative principles which believed that organization efficiency can be improved only by; arrangement of the organization hierarchy of authority in a predetermined manner, limiting of span of control at any of the points of hierarchy within the organization structure and specializing of functions according to process, purpose and clientele. Contrary to this, Simon used decision premises as the factor for analysis rather than the whole decision itself. Thus, similarly this research investigated the types of organization structure within private hospitals context and how the various organization structures in those contexts affected organizational learning.

The main limitation of this theory was the cognitive abilities of those tasked with coming up with a satisficing model. If they cannot comprehend a complex system consisting of interconnections between a firm's objectives and other components then such a model wouldn't be realized (Herbert, 1994).

2.2.2. Structuration Theory

The second theory was the structuration theory by Anthony Giddens. The argument behind this theory was that structure is both restraining and enabling. The theory assumes that an agent tasked with the implementation of a certain structure has a say and capability to determine how the final structure will be. Therefore, even though agents have no choice in which structure they are placed in, they still have the capability to modify the structure to suit their needs. If the same was true, then we expected to view quite a different set of structures explained by the composition of each hospital's agents (Giddens, 2009).

The structure of an institution takes on a dual form. In that it has the general boundary rules set at a higher level and also it has the human interaction between members of the group thus determining how to handle and treat each other. All these aspects may contribute to the levels of formality, complexity and centralization within the organization and by extension affect the levels of learning (Esslinger, 2009). Thus, from a dual perspective, structure can be defined individualistically and also broadly as a whole.

Structuration theory is backed by organization culture theory. The two have a common ground because individuals tend to reproduce a certain set of interaction as they execute their daily functions and hence create an internal culture. One shortfall of the theory is that Giddens focused on practical knowledge and paid less attention to discursive knowledge. He gave great emphasis to agency and less attention to structure as a whole. The emphasis on agency has made structural model and dimensions to be less developed as evidenced by current works and studies (Giddens, 2009).

2.2.3. Organizational Learning Theory

Peter Senge noted that any system within the society is created in a way that it will aim to self-improve itself. To support this claim, he gave an example of a toddler, who through his own individual internal desire to walk and internal determination will learn to walk and even do other things like talking by triggering his instinct. Thus, the same should apply to organization. To support the claim, he established the learning organizations model. This model consisted of five dimensions namely: personal mastery, mental models, team learning, shared vision and systems thinking (Thomas et al., 2009). They are discussed as follows.

According to Ramona et al. (2016) personal mastery would require each individual to aspire to be an expert in his or her field. This is achievable through attending trainings and furthering one's own education (Yang et al., 2004). Mental models refer to the expressions of people's thoughts and actions within the organization. If an organization sticks to its own mental model and doesn't allow it to be influenced by the many different mental perspectives it shall not grow or learn. Therefore, though an organization might have its own recommended mental model in line with its objectives needs, it nonetheless has to keep on updating it to accommodate those of individual working under it (Ortenbald, 2004).

Shared vision referrers to a mental view clear in the minds of those pursuing it. It is an ideal model in the minds of individuals within an organization. They usually intend to achieve the said vision in a specified time frame. Thus, all individuals would have a direction to pull towards as they perform their duties. On the other hand, team learning refers to a process where every member improves his working abilities in a way that the resultant is seen in the joint improvement of outcome of the group (Yang et al., 2004). Lastly system thinking advocates for superiority of the whole as opposed to linearity of decisions. This aspect is nonlinear and ensures that every aspect being pursued by the organization is aimed at moving the organization as a whole in all sections (Senge, 2009).

One limitation of organization learning is the lack of proper tools to measure the levels of learning. This is because learning is more subjective than objective topic. This research employed the use of DLOQ questionnaires to gauge levels of learning based on employees' subjective opinions.

2.3. Organization Structure

According to Robbin (2006), the structure of an organization is made up of three major dimensions. The dimensions are namely formalization, centralization and complexity.

Complexity refers to the degree of differentiations existing in an organization (Draft, 2006). Complexity was gauged using four questions ranked on a 1-7 Likert scale namely: Number of units in the organization, degree of divisions in departments, level of specialization (consisting yes or no questions whether certain tasks are performed by specialized personnel or not) and the degree of interdepartmental encounters (Gresov & Drazin, 2007).

Formalization is the scale to which regulations and rules have been used to describe behaviors within an organization. In this section of the questionnaire employees were asked to rate on a Likert scale of 1-7 the existence of: regulations on procedures, rules on monitoring of employees, regulations on monitoring of work development, rules on employee behavior and levels of resource employed to ensure compliance with rules (Gresov & Drazin, 2007).

Lastly, centralization refers to the degree of concentration of power of decision making within the top-level management in an organization (Child, 2008). This section sought to determine in which levels of the organization were the following decisions made: issues on work conflict, overtime, employee recruitment, job assignment, machinery decisions, priority of orders, layoff of workers, working methods, number of employees, production plans and staff selection. All which were ranked on 1-7 Likert scale (see Appendix B).

2.4. Empirical Review of the Literature

Chen et al. (2010) performed a study on role of organization structure in learning management. They concluded that whenever an institution had more non-centralized integration and less formalization, their knowledge management would increase and vice versa.

Helmhout (2011) conducted a study entitled learning from the fringe and concluded that learning level were elevated by an international structure. Another study was done by Mohammad et al. (2009). They realized that a direct relation between degree of learning and professionalism. They observed a negative and significant relation among formalization, centralization and vertical relation to organizational learning.

Organization structure affects the efficiency in coordination and distribution of knowledge and information within an organization (Chen & Huang, 2010). Other factors influenced by organizational structure included; sharing of organizational resources, interpersonal exchange, interaction between members and communication methods. In turn these factors dictated the state of learning.

Martinez et al. (2011), proposed that organizational structure had influenced organizational learning by affecting capability of an organization to innovate, improve and adapt to its environment. They observed that organization structure consisted primarily of organizational members who were responsible for interpreting and integrating knowledge. Thus, through their structural interaction learning could be achieved or not.

According to a study done by Carla (2019), the influence of organization structure on learning was characterized as follows; organic structure approach promoted learning

because it was characterized by low centralization and formalization and high levels of integration. While mechanistic approach depicted the exact opposite thus discouraging learning. Knowledge intensive organizations were abandoning formal structures in order to attain coordination through normative systems and social rewards. Recognizing of the social dimensions within an organization structure was found to be equally important in learning. Employees should be considered as individuals who learn through experience and may not be rational as previously thought of. To sum everything in Carla's study, organizations need to acknowledge the importance of organizational learning and assign it a Chief Knowledge Officer (CKO) within its structure, instead of leaving pursuit of knowledge to individual employees.

According to Martinez et al. (2011), the organizations environment is constantly changing and only those who can transform and adapt to the new changes get to survive. These are institutions that can adopt the characteristics of a learning organization. Due to continued evolution in medicine and science, the health system needs to be a continuous learning environment to keep up with events in the sector. One of the strategies proposed to counter the continued evolution is the transformation of institutions into learning organizations. Though this principle of learning organization has been used extensively in the corporate world, in very few instances has it been explored in the health care systems (Pantouvakis & Mpogiatzidis, 2013).

According to Progress International Limited, the objective of a learning organization is to see and embrace the value of learning and comprehend the importance of developing individuals in teams within the overall organization. This aspect creates a very vivid picture of what to expect within organizational learning. The organization further stated that

embracing organizational learning will enable it to move from the traditional models that failed to empower employees to a better one which inspire employees to: adapt to change easily, have better response to challenges, anticipate change, develop through innovation and generate energetic, goal oriented and loyal employees (Nzuve & Omolo, 2012).

Progress international limited further reiterated that, a learning organization culture is a combination of values, practices and attitudes that give support to the continuous learning process inside the organization. One of the key strategies used by firms embracing continuous learning is training. Through training, individuals within the organization can re-interpret their own worlds and how they relate to it. A true organizational learning culture will continuously challenge its inherent methods and ways of doing things.

According to Nzuve and Omolo (2012) Kenyan Commercial Banks had practiced the tenets of learning organization to a great extent by 2012. All the levels of commercial banks had scored an average of 61.17% on implementation of learning organization practices. The study recommended that banks needed to consider individual levels of learning before going in for the overall systems learning.

2.5. Summary of the Literature and Knowledge Gap

In conclusion, this literature has shown that there exists a relationship between organizational structure and learning. The direction of this relation has been observed to be changing across different industry sectors. Thus, the current study was used to depict the different relations between organization structure and organizational learning within the private healthcare. The relation would be used to steer further research and policies in the healthcare sector.

2.6. Conceptual Framework

Figure 2.1 shows the conceptual framework of the research. Organizational structure and organizational learning were the latent independent and dependent variables while complexity, formalization and centralization were observed variables of organization structure indices. On the other hand, inquiry and dialogue, continuous learning, embedded systems, system connection, empowerment, strategic leadership and continuous learning were the observed variables for organizational learning (Thomas et al., 2009).

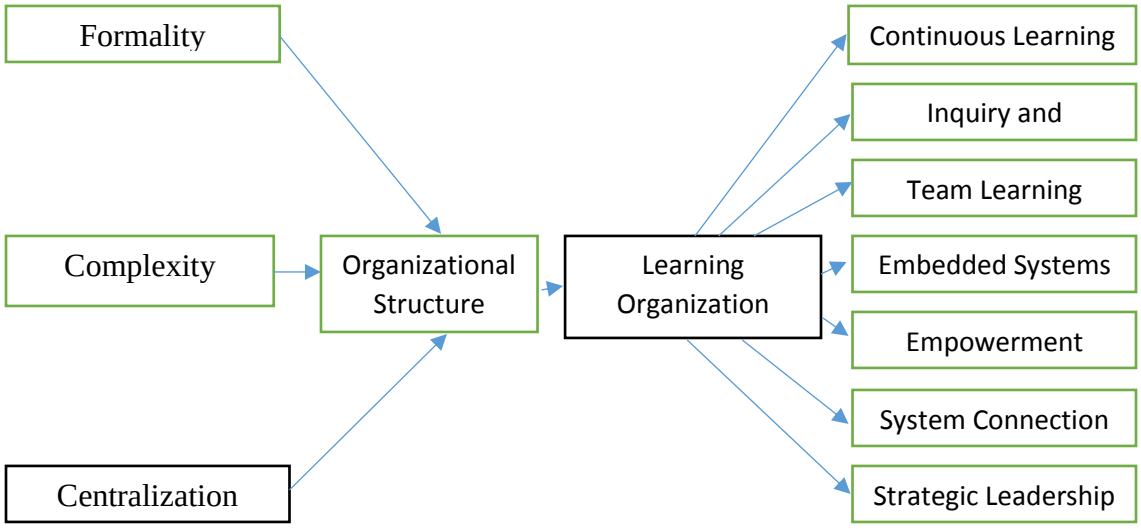

Figure 2.1: (Thomas et al., 2009). Conceptual framework of Organizational Structure Vs Learning Organization

CHAPTER THREE: METHODOLOGY

3.1. Introduction

This chapter described the research design employed, population of the study, sampling design implemented, data collection techniques and methods used to analyze the data.

3.2. Research Design

The research was used to study a causal relationship between organizational structure and organizational learning. Therefore, the methodology of this work was cross-sectional study investigating the causal relationship between organization structure and organizational learning. A cross-sectional study is a research carried out over a short time period or a point in time (Campbell & Bland, 1988). This kind of design is suitable for surveys because it's cheaper and can get data from a big sample proportion of a population. The design is used to determine the prevalence of certain outcomes within a population that are already existing. It's also suitable for studying causal relationships between variables (see Figure 2.1).

3.3. Population of the Study

The research population was a total of 114 private hospitals in Nairobi and Mombasa counties where majority of the hospitals reside. The above two counties are located in the two largest regions, the Greater Nairobi and Coast regions consisting of 44% of the total private hospitals in Kenya (see Appendix C). The total tally of hospitals and nursing homes in the two regions was 185 out of 413 country wide (Kenya Medical Directory, 2018).

3.4. Sampling Design

Using Cochran formula (Equation 3.1) and convenience sampling a total of 88 private hospitals were visited within Nairobi and Mombasa counties (Behzad & Aboulfazl, 2013).

The hospitals to be sampled were chosen based on ease of access and cooperation form respondents.

Equation 3.1; Cochran Formula

$$n = \frac{z^2 pqN}{Nd^2 + z^2 pq}$$

Where n – sample size, N – total population (114 hospitals), d – minimum error allowed of 5%, p=q=50% (random chance), z (1.96) – value of normal distribution at 95% confidence level. (Behzad & Aboulfazl, 2013).

3.5. Data Collection

In order to get quantitative primary data on the two variables, the research employed the use of modified Robin's standard questionnaire and Dimensions of Learning Organization Questionnaire (DLOQ). In each private hospital selected one questionnaire was left for a period of a week to be filled by an administrator and later collected (Yang, 2003).

Modified Robin's questionnaire on organization structure consisted of 20 structured questions made up of 4 complexity (including specialization) questions, 5 formality questions and 11 centralization questions scored on a 1-7 Linkert scale (Gresov & Drazin, 2007). The second part of the questionnaire (DLOQ) consisted of 21 structured questions. These questions were distributed in threes to each of the 7 aspects of organization learning. These aspects were scored on a 1-6 Linkert scale because learning organization is a subjective area.

3.6. Data Analysis

Equation 3.2; Regression model of Learning against Structure plus Error

$$Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + \epsilon$$

Equation 3.3; Determination of Error in Predicting value of Learning

$$\epsilon = \mathrm{Y} - \hat{\mathrm{Y}}$$

The relation between independent and dependent variable was to follow equation 3.1. Where Y was the observed dependent variable (organizational learning), $\hat{\mathrm{Y}}$ was the regression value of the dependent variable, ϵ(error) in predicting the true value of Y, b_0 the value of dependent variable when all independent variables are zero, b_1 was the coefficient with which X_1 (formality) related to learning, b_2 was the coefficient with which X_2 (complexity) related to learning, b_3 was the coefficient with which X_3 (specialization) related to learning and b_4 was the coefficient with which X_4 (centralization) related to learning. The data collected was validated using descriptive statistics such as frequencies of observations, range of data, mean, standard deviation, minimum and maximum, kurtosis and skewness (Yang et al., 2004).

Inferential statistics was obtained by determining the correlation coefficient and regression estimates of the relation between the two variables computed using ANOVA. The research question was answered using the Pearson's correlation test to depict the intensity and direction of relationships between the two variables. Multi-regression was used to predict how the dependent variable changes with respect to change in independent variable (Yang et al., 2004).

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSION OF RESULTS

4.1. Introduction

This chapter of the project contains discussions about the presentation and interpretation of the research findings. The objective of the study was to determine the influence of organizational structure on the organizational learning of private hospitals in Nairobi and Mombasa counties. Primary data collection was done using structure questionnaires administered to 88 respondents each being an employee of a single private hospital within one of the two counties. The data collected was later analyzed in line with the study objectives and findings presented as per the methodology guidelines.

4.2. Response Rate

The study had a target of 88 private hospitals in either of the counties of Nairobi and Mombasa. The first batch of questionnaires yielded a 60% response rate totaling 52 questionnaires answered. To overcome this deficit of 36 respondents more questionnaires beyond the required limit of 88 (47 more questionnaires) were dispersed through email to hospital in Mombasa and Nairobi counties that had not been visited prior. This time a 100% response was met and considered adequate according to Mugenda (1999).

4.3. The General Information

This section of the study included analysis of professional occupation of respondents and bed capacity of the respective private hospitals visited.

4.3.1. Occupation of Respondents

According to table 4.1, it's very evident that most of the respondents were from the medical field with clinical officers leading at 26.1 percent of the total respondents' population.

Considering that some of the medical staff doubled in as administrative officers in the hospitals, therefore they gave the research a uniform approach in response in terms of administrative know how of the respondents.

Table 4.1.

Occupation of respondents

Occupation					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Biomed	5	5.7	5.7	5.7
	Nurse	20	22.7	22.7	28.4
	Radiographer	4	4.5	4.5	33.0
	Accountant	12	13.6	13.6	46.6
	Clinical Officer	23	26.1	26.1	72.7
	Pharmacist	9	10.2	10.2	83.0
	Administrator	7	8.0	8.0	90.9
	HR	5	5.7	5.7	96.6
	LAB TECH	3	3.4	3.4	100.0
	Total	88	100.0	100.0	

Source: Primary Data (2019)

According to figure 4.1 below it is evident that biomed, radiographers, accountants and lab-technicians scored learning highly compared to the other professions. The reason for the high variation can be attributed to the fact that only a few of the population came from biomed, radiography and lab technical areas. Therefore, any answer from the parties could spike and would require a larger sample size to clearly state whether the profession choice affected learning or not. This concern is settled from the results of the other professions

that had a substantial number of respondents yet did not elicit any clear direction of either scoring learning highly or lowly.

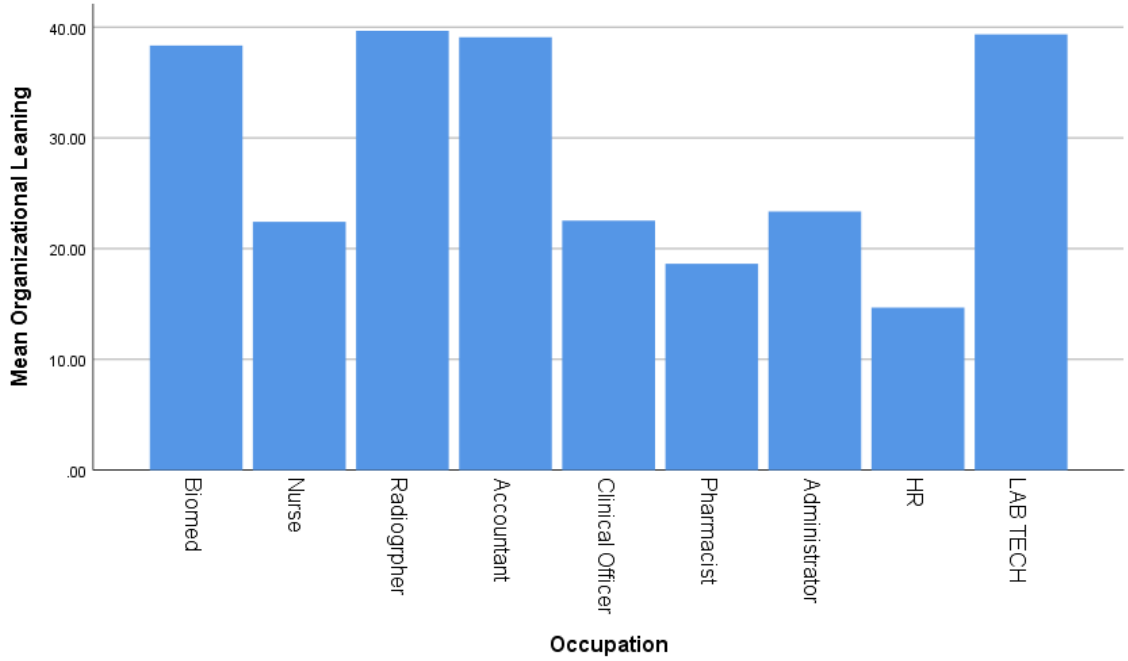

Figure 4.1: (Primary Data, 2019). Bar Graph of Mean Scores of Learning across Occupations of Respondent

4.3.2. Bed Capacity of Hospitals

The bed capacity of hospitals ranged from outpatient facilities (zero beds) to the highest of 800 beds. The majority of respondents (83 percent) came from hospitals with capacity well over 150 beds. The majority of private hospitals in Nairobi and Mombasa have a bed capacity of between 150-300 beds standing at 54.5% of the total as per table 4.2.

Table 4.2.

Frequency Distribution of Private Hospitals Bed Capacities in Nairobi and Mombasa Counties

Bed Capacity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-150	15	17.0	17.0	17.0

150-300	48	54.5	54.5	71.5
300-450	24	27.3	27.3	98.8
Above 450	1	1.1	1.1	99.9
Total	88	100.0	100.0	

Source: Primary Data (2019)

4.4. Descriptive Analysis of Organizational Structure and Learning Variables

All the descriptive data in this research is presented in Appendix G. Starting with the three dimensions of organizational structure and then the seven dimensions of learning organization.

4.4.1. Organizational Structure Descriptive Analysis

Among all the dimensions of organizational structure, complexity scored the highest mean of 4.3339 while centralization scored the least mean of 4.0666. The range in difference of the means was 0.2673 translating to a 3.819 percentage difference in scoring of the dimensions. The scoring of centralization had the highest standard deviation of 1.94139 compared to the lowest of 1.75460 in complexity of work. All of the dimensions of organizational structure were normally skewed with the highest being formality at .0242 and the lowest centralization at -0.003. These were all within the limit mark of 0.771 skewness. The scores of the dimensions of organization structure were highly peaked with the highest centralization having a kurtosis of -1.746 and the least being complexity at -1.616 kurtosis. All were above the standard kurtosis of 1.524.

4.4.2. Organizational Learning Descriptive Analysis

In this study, of all the dimensions of learning organization, continuous learning scored the highest mean of 3.8264 while inquiry and dialogue scored the lowest mean of 3.6824. The range in difference of the two means was 0.144 out of the maximum of 6-point scale. This

is a 2.4 percent deviation in scoring of organizational learning dimensions. Inquiry and dialogue had the highest standard deviation of 1.80178 compared to the lowest standard deviation of 1.54758 in team learning dimension. The highest variance was exhibited by inquiry and dialogue at 3.246 while the lowest was exhibited by embedded systems at 2.395. The most skewed dimension of learning organization was Inquiry and dialogue standing at -0.80 and the least skewed dimension was empowerment at 0.11. The most peaked dimension was Team learning with a kurtosis of -1.715 way above the accepted of 1.524 and the least peaked dimension being empowerment at a Kurtosis of -1.582. All the means of dimensions of organizational were above the median score of 3.00 and thus would depict a positive implementation of organizational learning in private hospitals. Organizational learning mean of total score was 26.2305 out of 42 total score. This meant that implementation of organizational learning dimensions was well above average at a percentage of 62.45. The total scores of organizational learning dimension ranged from 11.00 to 39.66, meaning that most of the respondents were exposed to different levels of organizational learning implementation and thus the change could be attributable to certain factor in the different environments experienced by the employees. This was further supported by a high standard deviation of 11.74072 in scoring of organizational learning.

4.5. Analysis of Organizational Structure

Formality and centralization have a strong positive correlation of 0.972. This means an increase in formality results into 97.2% increase in centralization within private health care in Nairobi and Mombasa counties. Complexity has also a strong positive correlation to specialization at a value of 0.996. The reverse is also true when relating formality to complexity and specialization both giving a strong negative correlation of -0.966 and -

0.967 respectively. This means that an increase in formality would result to a more than 96 percent decrease in complexity and centralization. Lastly centralization has a strong negative correlation to complexity and specialization represented by -0.990 and -0.992 respectively. This means that an increase in centralization would result to a more than 99 percent decrease in complexity and specialization. The relation is evidenced in table 4.3.

Table 4.3.

Correlations of Dimensions of Organizational Structure

Correlations					
		Formality	Complexity of work	Specialization	Centralization of Work
Formality	Pearson Correlation	1	-.966**	-.967**	.972**
	Sig. (2-tailed)		.000	.000	.000
	N	88	88	88	88
Complexity of work	Pearson Correlation	-.966**	1	.996**	-.990**
	Sig. (2-tailed)	.000		.000	.000
	N	88	88	88	88
Specialization	Pearson Correlation	-.967**	.996**	1	-.992**
	Sig. (2-tailed)	.000	.000		.000
	N	88	88	88	88
Centralization of Work	Pearson Correlation	.972**	-.990**	-.992**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	88	88	88	88

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Primary Data (2019)

4.6. Analysis of Organizational Learning

Among all the seven dimensions of organization learning, continuous learning seemed to be the highest scored and implemented as per the respondents (see Figure 4.2). This is attributed to training programs and personal education developments of personnel across

all the hospitals visited. The least practiced aspect of organizational learning was inquiry and dialogue. It depicted a scenario where individual employees lacked the opportunity to give honest opinions and build trust amongst themselves.

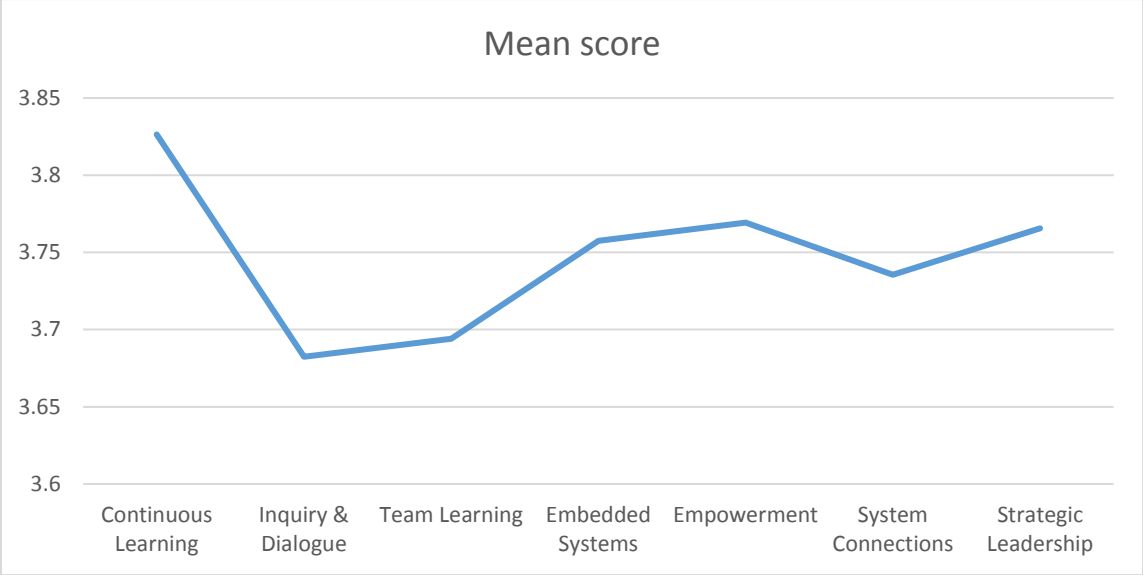

Figure 4.2: (Primary Data, 2019) Line graph of Mean Scores of Dimensions of Organizational Learning

4.7. Influence of Organizational Structure on Learning

The main objective was tested to find out if there was an influence of organizational structure on organizational learning. This involved the use of correlation coefficients and regression analysis through ANOVA.

4.7.1. Correlation of Organizational Structure to Learning

The correlation of structure to learning was tested using Pearson correlation test and yielded results as per table 4.4 below (see Appendix D).

Table 4.4.

Correlation of Organizational Structure Dimensions to Organizational Learning

Correlation						
		Formality	Complexity	Specialization	Centralization	Organizational learning
Organizational Leaning	Pearson Correlation	-.977**	.987**	.990**	-.996**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	88	88	88	88	88

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Primary Data (2019)

The findings of table 4.4 show that there existed a very strong positive correlation between organizational learning and specialization and complexity while the reverse is true with formality and centralization. The results were significant at 0.01 confidence levels. These findings are consistent with Ulku and Resit (2015).

4.7.2. Regression Analysis

The regression model depicted by Equation 1 was developed using regression analysis of the relationship between organizational structure and learning. The results shown below were used to achieve the objective of the study. The results of the regression analysis were supported by ANOVA and proven to be statistically significant as shown in table 4.6 of the study (see Appendix E).

Table 4.5

Regression Model Depicting R-Square Value of Relation between Structure and Learning

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.997[a]	.995	.994	.88539

Source: Primary Data (2019)

According to table 4.5, the regression model yielded an R value of 0.995. This meant that 99.5% of the behavior of organizational learning measured by the questionnaire could be explained by the regression model.

Table 4.6

ANOVA Results of Structure Vs Learning

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11927.406	4	2981.852	3803.813	.000[b]
	Residual	65.065	83	.784		
	Total	11992.471	87			

Source: Primary Data (2019)

ANOVA was used to establish whether the regression model was statistically significant.

The test results as per table 4.6, shows that the regression model was statistically significant at a p-value of 0.00. Therefore, the model predicted the behavior of organizational learning at a 99.9% surety. The likelihood of predicting organizational learning wrongly was less than 0.01%. This was further supported by the high F-value of 3803.813. The value implied that out of 3804 trials only 1 would come out wrong and the remaining 3803.813 predictions would be correct. The ANOVA values are further supported by the scatter diagram of the Regression Model Residuals that clearly shows no pattern, therefore validating the data collected (see Appendix F).

Table 4.7

Regression Model Constants and respective Significance in the Relation between Structure and Learning

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

1	(Constant)	48.532	3.304		14.687	.000
	Complexity of work	1.340	.616	.200	2.176	.032
	Formality	-.941	.226	-.145	-4.156	.000
	Specialization	1.904	.733	.261	2.597	.011
	Centralization of Work	-4.808	.421	-.795	-11.413	.000

Source: Primary Data (2019)

Equation 4.1. Results of Regression Model Between Organizational Structure and Learning

$$\hat{Y} = \mathbf{48.532} - \mathbf{0.941}X_1 + \mathbf{1.34}X_2 + \mathbf{1.904}X_3 - \mathbf{4.808}X_4$$

The model as per table 4.7, shows that if all the independent factors tested in this study were held constant the value of organizational learning would be 48.532 as influenced by other factors apart from the once investigated at a confidence level of 0.01 certainty. The results also depict that if other independent variables were zero, a unit increase in formality of work would result into a decrease of 0.94 in learning. A unit increase in complexity would lead to an increase in learning by 1.34. A similar increase in specialization would result to an increase in learning by 1.904 at 0.011 confidence level. Lastly, a unit increase in centralization would lead to 4.808 decrease in learning at a confidence level of 0.01 (see Appendix F). These findings are consistent with Ulku and Resit (2015) who studied learning in Turkish automotive industry.

4.8. Discussion of Findings

According to Mugenda (1999), a response rate of over 70 percent is considered adequate for research purposes. In comparison, the study yielded a 100 percent response rate due to

the wide number of respondents available within any single hospital. The respondents were equally rich in terms of diversity. A total of ten professions were included in the list of respondents. They ranged from Doctors to Human resource administrators. Another information sought was the bed capacity of the hospitals. Among the facilities visited, over 83 percent had a bed capacity of over 150 beds therefore forming an adequate environment from which organizational structure could be studied and its effects on learning. The other lots of hospitals with capacity below 150 beds majorly consisted of outpatient hospitals that were equally large with adequate source of information.

Inquiry and dialogue seem to the least implemented forms of learning in the hospital environment. This is indicative of the inability of individuals to share views openly and objectively with both their superiors and collogues. Thus, it created an environment where trust was less among the teams based on the low score of inquiry and dialogue (see Figure 4.2). Organizational structure dimensions did not behave or move in the same direction. Specialization and complexity seem to behave in an inverse manner to formality and centralization. This is indicative of the main two forms of inverse structure existing in organizations known as organic and mechanistic structures. This is backed by the works of Carla (2019).

Pearson correlation of the two variables depicted quite a strong relation between structure and learning scoring the dimensions of structure at -0.977, 0.987, 0.99 and -0.996 to be the correlations of formality, complexity, specialization and centralization. The values are clearly indicative of the direction structure should take and are consistent with the findings of Ulku and Resit (2015). The regression model observed was found to be statistically significant based on ANOVA results that were significant at 0.01 confidence levels. This

meant that the regression model as per Equation 4.1 is indicative of the relation between organizational learning and structure 99 percent of the times out of 100 trials. The results are consistent with the works of Chen and Huang (2010).

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter entails the presentation of summary of data findings on the relation between organizational structure and organizational learning in private hospitals in both Nairobi and Mombasa counties. The chapter follows an orderly structure flowing from summary of findings, conclusions and recommendations of the study and finally limitations and areas of further research of the study.

5.2. Summary of Findings, Conclusions and Recommendations

The study sample consisted of individuals working in private hospitals from a wide array of professions. The list of professions sought as respondents included at least ten professions as evidenced by table 4.1. This gave a holistic view from the different perspectives of the many professionals engaged. Most of the respondents were in certain capacity of authority and thus were able to give response that was all inclusive of their facility. The research focused on private hospitals due two main reasons. Their richness in terms of pool of professionals from both public and private practice and also less interference structure wise and administratively from the government.

The most practiced form of organizational learning seemed to be continuous learning with a mean score of 3.82 out of 6. The least practiced form of organizational learning was inquiry and dialogue. This is supported by the fact that employees always felt intimidated in airing their own view and thus queried the system of operation less often evidenced by the questions asked in the questionnaire and the respondents' answers. Respondents

indicated that individuals were less honest and little trust was being cultivated amongst workers.

Specialization was the most positive responsive dimension of organizational structure to learning. It was followed closely by complexity. In the above context complexity meant how rich each job was and to some extent the degrees of interconnection between the various jobs. It would therefore lead to more learning for employees. Centralization and formality on the other hand had an inverse effect on learning. It decreased the levels of learning as depicted by a negative Pearson's correlation.

5.3. Conclusions of the Study

The main study object of determining the influence of organizational structure on organizational learning in Nairobi and Mombasa counties was achieved. The correlation between organizational structure dimensions and organizational learning was well established to be very strong. Specialization and complexity of work both correlated to organizational learning positively at values of 0.99 and 0987 respectively, while formality and centralization correlated to organizational learning strongly and negatively at values of -0.977 and -0.996. Therefore, to increase learning in a private hospital setting one would need to increase work complexity and specialization while reducing levels of centralization and formality of work.

The results are backed by high levels of significance at 0.01. The degrees of correlation between learning and organizational structure were tested and found to be statistically significant at 0.01 2-tailed testing. This meant out of 100 trials there would only exist a single chance of an error. Similar levels of significance were achieved in the ANOVA test to back the regression model generated. The ANOVA yielded a confidence level of 0.01

that the relation between organizational structure and learning most certainly followed Equation 4.1.

5.4. Study Recommendations

Organizations should try and focus on developing other dimensions of organizational learning alongside continuous learning. They should focus more resources on the least implemented form of learning like inquiry and dialogue and team learning. The hospitals can also further learning by enriching work through making it more complex and also defining work by establishing different specializations within the work environment. Work should be more decentralized and made less formal to allow for flow of knowledge from all levels of the organization both horizontally and vertically.

5.5. Policy Recommendations

Based on the results of the study, hospital administrators can implement policies that pursue the other dimensions of learning organization especially team learning and inquiry and dialogue so as to foster an all-round learning within their facilities. The management can create policies that encourage decentralization of authority, enhance job enrichment, facilitate specialization of personnel and lead to de-formalization of work environment so as to further organizational learning (Ulku & Resit, 2015).

5.6. Limitations of the Study

The main limitation of this study was confidentiality challenge, even though the questionnaires were accompanied with a letter from the University of Nairobi promising anonymity, respondents were still skeptical. Thus, resulting to non-response from certain facilities that were targeted for study. Another challenge was the impatience of other respondents who filled columns of the questionnaire in certain patterns just to avoid taking

time and understanding the questions. Lastly the structure of questions in relation to organizational structure limited respondent to only four dimensions of organizational structure yet in reality there exists more recent forms of organizational structures including service line structure in addition to mechanistic and organic structure (Reich et al., 2008).

5.7. Suggestions for Further Research

This study was conducted and results interpreted of private hospitals. The same can be done for public hospitals to gauge and see the difference for policy making purposes. In addition to organizational structure, there exists other factors that may affect organizational learning including organizational culture. These other areas can also be investigated to add onto the existing body of knowledge. Lastly another area could be to investigate why there exists difference in the levels of implementation of the various dimensions of organizational learning.

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APPENDICES

APPENDIX A: Letter of Introduction

Felix Opiyo Ouma,

University of Nairobi,

P.O BOX 30197-00100,

Nairobi

Dear Sir/ Madam,

RE: REQUEST FOR AUTHORIZATION TO COLLECT DATA

I am a Master's student at the University of Nairobi pursuing a Degree of Master of Business Administration in Strategic Management. I am writing a research paper that is a requirement for the fulfillment of the degree and the purpose is to find out the **relationship between Organizational structure and learning in private hospitals**. Attached is a copy of my questionnaire that I request you to fill in.

The information provided in the questionnaire is only meant for purposes of academics and will be confidential.

Thank you for your assistance.

Sincerely,

Felix Opiyo Ouma.

APPENDIX B: Research Questionnaire

A. General Information

1. Rank _____.
2. Occupation _____.
3. Bed capacity _____.

B. Using the scale below rate your facility as per the questions there after

Agree Very Strongly	7
Agree Strongly	6
Agree	5
Undecided	4
Disagree	3
Disagree Strongly	2
Disagree Very Strongly	1

a. Formality of work	7	6	5	4	3	2	1
In my facility, procedures are based on regulations							
In my facility, monitoring of work development is based on regulations							
In my facility, monitoring of employees is based on regulations							
In my facility, there are rules governing behaviour							
In my facility, resources are employed to ensure compliance with rules							
b. Complexity of work	7	6	5	4	3	2	1
i. In my facility, sections are interdivisional							
In my facility, work is divided into section units							
In my facility, there are intersectional encounters							
ii. In my facility the following tasks are performed by specialized personnel	Yes			No			

Consultation		
HIV testing and Counselling		
Radiology and Imaging		
Blood Transfusion and Donation		
Renal Dialysis		
Mother and Child Healthcare		
MRI and CT-scan		
Inpatient		
Outpatient		
Theatre		
Comprehensive care clinic		
Pharmacy		
Training of medical students		
Chemotherapy		
Maternity		

c. Centralization of work

In my facility the following decisions are made at level:

(Using a scale of 1-7 rank the decision levels in your organization and rank the following activities)

Centralization Decisions	7	6	5	4	3	2	1
Decisions about work conflict are made by							
Decisions about overtime are made by							
Decisions about employee recruitment are made by							
Decisions about job assignment are made by							
Decisions about machinery are made by							
Decisions about workers layoff are made by							
Decisions about order priority are made by							
Decisions about employee numbers are made by							

Decisions about working methods are made by							
Decisions about staff selection are made by							
Decisions about production plan are made by							

C. Use the scale below to answer questions thereafter

Almost always – 6	Often – 5	Occasionally – 4
Sometimes – 3	Seldom – 2	Almost Never – 1

Use the scale below to answer the following questions by ticking where appropriate		6	5	4	3	2	1
Continuous learning	In my facility, people help each other learn						
	In my facility people are given time to support learning						
	In my facility people are rewarded for learning						
Inquiry and Dialogue	In my facility, people give open and honest feedback to each other						
	In my facility, whenever people state their view, they also ask what others think						
	In my facility, people spend time building trust with each other						
Team learning	In my facility, teams/groups have freedom to adapt their goals as needed						
	In my facility, teams/groups revise their thinking as a result of group discussions or information collected						
	In my facility, teams/groups are confident that the facility will act as per their recommendations						
Embedded Systems	My facility creates systems to measure gaps between current and expected performance						

	My facility makes its lessons learned available to all employees						
	My facility measures the results of the time and resources spent on training						
Empowerment	My facility recognizes people for taking initiatives						
	My facility gives people control over the resources they need to accomplish their work						
	My facility supports employees who take calculated risks						
System Connections	My facility encourages people to think from a global perspective						
	My facility works together with the outside community to meet mutual needs						
	My facility encourages people to get answers from across the facility when solving problems						
Strategic Leadership	In my facility, leaders mentor and coach those they lead						
	In my facility, leaders continually look for opportunities to learn						
	In my facility, leaders ensure that the facility's actions are consistent with its values						

APPENDIX C: Private Hospitals in the Greater Nairobi and Coast Regions

Index of Facilities

PRIVATE HOSPITALS 145

NAIROBI COUNTY

Al Amin Nursing Home ..... Nairobi
Alliance Medical Centre ..... Nairobi
Arrow Web Hospital ..... Nairobi
Ask A Doc Limited (Mountain View Medical Centre) ...Nairobi
Avenue Hospital ..... Nairobi
Bahati Hospital (Joska) ..... Nairobi
Better Living Hospital ..... Nairobi
Bristol Park Hospital ..... Nairobi
Care Hospital ..... Nairobi
Chiromo Lane Medical Centre ..... Nairobi
City Eye Hospital ..... Nairobi
City Nursing Home Hospital-- ..... Nairobi
Coptic Hospital ..... Nairobi
Donholm Maternity & Nursing Home ..... Nairobi
Dorkcare Hospital ..... Nairobi
Domaled Community Health Centre & Maternity Nairobi
Eagle Nursing Home ..... Nairobi
Edelvale Trust (Jamaa Mission Hospital) ... Nairobi
Emmaus Nursing Home ..... Nairobi
Family Health Options Kenya ..... Nairobi
Gertrude's Children's Hospital ..... Nairobi
Giovanna-E-Sylvia Community Hospital ..... Nairobi
Guru Nanak Ramgarhia Sikha Hospital . Nairobi
Huruma Maternity & Nursing Home ..... Nairobi
Jon-Lee International Hospital ..... Nairobi
Joy Nursing Home & Maternity ..... Nairobi
Juja Road Hospital ..... Nairobi
Kahawa Wendani Hospital ..... Nairobi
Kasarani Maternity & Nursing Home ..... Nairobi
Kayole Hospital ..... Nairobi
Komarock Modern Healthcare ..... Nairobi
Ladnan Hospital ..... Nairobi
Langata Hospital Ltd ..... Nairobi
Lenana Home Healthcare ..... Nairobi
Lions Sightfirst Eye Hospital ..... Nairobi
M.P. Shah Hospital ..... Nairobi
Madina Hospital ..... Nairobi
Makkah Nursing Home & Medical Clinic .... Nairobi
Maria Hospital, Maternity & Nursing Home Nairobi
Maria Immaculata Hospital ..... Nairobi
Mariakani Cottage Hospital ..... Nairobi
Marura Nursing Home ..... Nairobi
Melchizedek Hospital Ltd. ..... Nairobi
Menelik Medical Centre Hospital ..... Nairobi
Meridian Equator Hospital ..... Nairobi
Metropolitan Hospital, Nairobi ..... Nairobi
Mid-Hill Nursing Home ..... Nairobi
Mkunga Maternity & Nursing Home ..... Nairobi
Mother & Child Hospital Ltd. ..... Nairobi
Muteithania Nursing Home & Maternity ..... Nairobi
Nairobi Adventist Hospital ..... Nairobi
Nairobi East Hospital Ltd ..... Nairobi
Nairobi South Medical Centre ..... Nairobi
Nairobi West Hospital ..... Nairobi
Nairobi Women's Hospital ..... Nairobi
Neema Hospital ..... Nairobi
Park Hospital ..... Nairobi
Park Road Nursing Home ..... Nairobi
Patanisho Maternity & Nursing Home ... Nairobi
Prime Health Services ..... Nairobi
Prudent Medical Centre & Maternity Home Nairobi
Radiant Group of Hospitals ..... Nairobi
Ruai Family Hospital Ltd. ..... Nairobi
Ruaraka Uhai Neema Hospital ..... Nairobi
Saika Nursing Home ..... Nairobi
Salama Nursing & Maternity Home ..... Nairobi
Scion Healthcare and Maternity Home ..... Nairobi
South B Hospital ..... Nairobi
South C Hospital ..... Nairobi
St. Catherine's Nursing Home ..... Nairobi
St. Francis Community Hospital ..... Nairobi
St. John Hospital, Githurai ..... Nairobi
St. Joseph Nursing Home, Eastleigh ..... Nairobi
St. Mary Health Services ..... Nairobi
St. Mary's Mission Hospital ..... Nairobi
St. Patrick Healthcare Centre ..... Nairobi
The Aga Khan University Hospital, Nairobi Nairobi
The Karen Hospital ..... Nairobi
The Mater Hospital ..... Nairobi
The Nairobi Hospital ..... Nairobi
Umoja Hospital ..... Nairobi
Unity Nursing Home ..... Nairobi
Upperhill Medical Centre ..... Nairobi
Victory Hospital Ltd. ..... Nairobi
Wentworth Hospital The ..... Nairobi
Woodstreet Clinic and Nursing Home ..... Nairobi
Zambezi Hospital' The ..... Nairobi

KAJIADO COUNTY

Blessed Community Medical Centre ..... Kajiado
Enkitok Joy Nursing Home ..... Kajiado
Fatima Maternity Hospital ..... Kajiado
Galaxy Medical Centre ..... Kajiado
Garlands Medical Centre ..... Kajiado
Kitengela Medical Service ..... Kajiado
KKIT Nursing Home ..... Kajiado
Mariakani Cottage Hospital ..... Kajiado
Matasia Nursing Home ..... Kajiado
Meridian Hosital ..... Kajiado
Newlife Mission Hospital ..... Kajiado
Ngong Rapha Hospital ..... Kajiado
Puan Nursing Home ..... Kajiado
Sinai Hospital-Rongai ..... Kajiado
St. Pauls Hospital' The ..... Kajiado
Sucos Hospital ..... Kajiado
Tabernacle International Hospital ..... Kajiado
Topcare Nursing Home ..... Kajiado
Trinity Care Centre ..... Kajiado
Wama Hospital ..... Kajiado
Wananchi Jamii Maternity & Nursing Home Kajiado

KIAMBU COUNTY

A.I.C Kijabe Hospital ..... Kiambu
AIC Cure International Hospital ..... Kiambu
Arise Hospital ..... Kiambu
Beta Care Hospital Ltd ..... Kiambu
Bethany Kids ..... Kiambu
Blessed Louis Palazzolo Health Centre ..... Kiambu
Blue Haven Hospital ..... Kiambu
Central Memorial Hospital ..... Kiambu
Edianna Hospital ..... Kiambu
Githurai Healthcare Medical & Dental Hospital ..Kiambu
Grace Memorial Hospital ..... Kiambu
Immaculate Heart of Mary Hospital ..... Kiambu
Jacaranda Health ..... Kiambu
JKUAT Hospital ..... Kiambu
Juja Mordern Hospital ..... Kiambu
Kalimoni Mission Hospital ..... Kiambu
Lankia Nursing Home ..... Kiambu
Limuru Cottage Hospital ..... Kiambu
Limuru Medical & Surgical Consultation Centre Kiambu
Limuru Nursing Home ..... Kiambu
Marura Nursing Home ..... Kiambu
Mary Help The Sick Mission Hospital ..... Kiambu
Mercy Light Hospital ..... Kiambu
Mt. Sinai Hospital ..... Kiambu
Naidu Hospital ..... Kiambu
Nazareth Hospital ..... Kiambu
P.C.E.A. Kikuyu Hospital ..... Kiambu
Plainsview Nursing Home ..... Kiambu
Radiant Group of Hospitals ..... Kiambu
Ruiru Hospital Ltd ..... Kiambu
Spa Nursing Home ..... Kiambu
St. Johns Hospital ..... Kiambu
St. Mary Health Services ..... Kiambu
St. Matia Mulumba Mission Hospital ..... Kiambu
St. Teresa Maternity & Nursing Home ..... Kiambu
Stanhope Healthcare & Diagnostics Centre Kiambu
Sunview Maternity & Nursing Home ..... Kiambu
Thika Nursing Home ..... Kiambu
Vineyard Hospital ..... Kiambu

Coast Region

PRIVATE HOSPITALS 40

KILIFI COUNTY

A.C.K St. Luke's Mission Nursing Home ..... Kilifi
Mtwapa Medical & Nursing Home ..... Kilifi
Musenangu Maternity & Nursing Home ..... Kilifi
Pwani Maternity & Nursing Home ..... Kilifi
Star Hospital ..... Kilifi
Swiss Cottage Hospital ..... Kilifi
Tawfiq Hospital ..... Kilifi

KWALE COUNTY

Diani Beach Hospital ..... Kwale
Diani Nursing Home, Ukunda ..... Kwale
Kaya Medical Centre ..... Kwale
Palm Beach Hospital ..... Kwale

MOMBASA COUNTY

Alfarooq Hospital ..... Mombasa
Avenue Healthcare Hospital ..... Mombasa
Bakarani Maternity & NursingHospital Mombasa
Belmo Hospital ..... Mombasa
Bomu Medical Hospital ..... Mombasa
Green Crescent Maternity & Nursing Home .... Mombasa
Jocham Hospital ..... Mombasa
Mainland Health Center ..... Mombasa
Marie Stopes Mombasa Nursing Home.. Mombasa
Mary Immaculate Maternity & Nursing Home.. Mombasa
Mewa Hospital ..... Mombasa
Mlaleo Health Centre ..... Mombasa
Mombasa Eye Hospital & Laser Centre . Mombasa
Mombasa Hospital, The ..... Mombasa
New Mvita Hospital ..... Mombasa
Nyali Children Hospital' The ..... Mombasa
Nyali Healthcare Ltd ..... Mombasa
Nyali Paediatric Hospital, The ..... Mombasa
Pandya Memorial Hospital ..... Mombasa
Premier Hospital ..... Mombasa
Salaam Hospital ..... Mombasa
Sayyida Fatima Hospital ..... Mombasa
Seaside Hospital & Nursing Home ..... Mombasa
Shiloh Nursing Clinic ..... Mombasa
Singawa Maternity & Nursing Home ..... Mombasa
St. Thomas Maternity Hospital ..... Mombasa
The Aga Khan Hospital, Mombasa ..... Mombasa
Tudor Nursing Home ..... Mombasa

TAITA TAVETA COUNTY

Mountainview Maternity & Nursing .... Taita Taveta

GOVERNMENT HOSPITALS 24

KILIFI COUNTY

Bamba Sub-District Hospital ..... Kilifi
Faza Hospital ..... Kilifi
Jibana Sub-District Hospital ..... Kilifi
Kilifi District Hospital ..... Kilifi
Lamu District Hospital ..... Kilifi
Malindi District Hospital ..... Kilifi
Mariakani District Hospital ..... Kilifi

KWALE COUNTY

Kinango Hospital ..... Kwale
Msambweni District Hospital ..... Kwale

MOMBASA COUNTY

Changamwe Health Centre ..... Mombasa
Likoni District Hospital ..... Mombasa
Mombasa Level 5 Hospital ..... Mombasa
Port Reitz District Hospital ..... Mombasa
Tudor District Hospital ..... Mombasa

TANA RIVER COUNTY

Garsen Health Centre ..... Tana River
Hola District Hospital ..... Tana River
Mpeketoni Sub-District Hospital ..... Tana River
Ngao District Hospital ..... Tana River

TAITA TAVETA COUNTY

Mwambirwa Sub-District Hospital ..... Taita Taveta
Mwatate Sub-District Hospital ..... Taita Taveta
Taveta District Hospital ..... Taita Taveta
Voi District Hospital ..... Taita Taveta
Wesu District Hospital ..... Taita Taveta
Wundanyi Sub-District Hospital ..... Taita Taveta

MEDICAL EQUIPMENT SUPPLIERS 11

MOMBASA COUNTY

African Cotton Industries Ltd ..... Mombasa
Amar Healthcare Suppliers ..... Mombasa
BOC Kenya Ltd ..... Mombasa
Chemolife Ltd. ..... Mombasa
Eldohosp Pharmaceuticals Ltd ..... Mombasa
Mark Laboratories ..... Mombasa
Mombasa Surgical Supplies ..... Mombasa

Kenya Medical Directory. (2018, December). *Health care in Kenya (24th ed).* Express Communications Limited. Retrieved from http://www.healthcareinkenya.com

APPENDIX D: Correlations

Descriptive Statistics

	Mean	Std. Deviation	N
Formality	4.0907	1.80510	88
Complexity of work	4.2339	1.75460	88
Specialization	3.5569	1.61003	88
Centralization of Work	4.0666	1.94139	88
Organizational Leaning	26.2305	11.74072	88

Correlations

		Formality	Complexity of work	Specialization	Centralization of Work	Organizational Leaning
Formality	Pearson Correlation	1	-.966**	-.967**	.972**	-.977**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	88	88	88	88	88
Complexity of work	Pearson Correlation	-.966**	1	.996**	-.990**	.987**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	88	88	88	88	88
Specialization	Pearson Correlation	-.967**	.996**	1	-.992**	.990**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	88	88	88	88	88
Centralization of Work	Pearson Correlation	.972**	-.990**	-.992**	1	-.996**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	88	88	88	88	88
Organizational Leaning	Pearson Correlation	-.977**	.987**	.990**	-.996**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	88	88	88	88	88

**. Correlation is significant at the 0.01 level (2-tailed).

APPENDIX E: Regression Analysis

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Centralization of Work, Formality, Complexity of work, Specialization[b]	.	Enter

a. Dependent Variable: Organizational Leaning
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.997[a]	.995	.994	.88539

a. Predictors: (Constant), Centralization of Work, Formality, Complexity of work, Specialization

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11927.406	4	2981.852	3803.813	.000[b]
	Residual	65.065	83	.784		
	Total	11992.471	87			

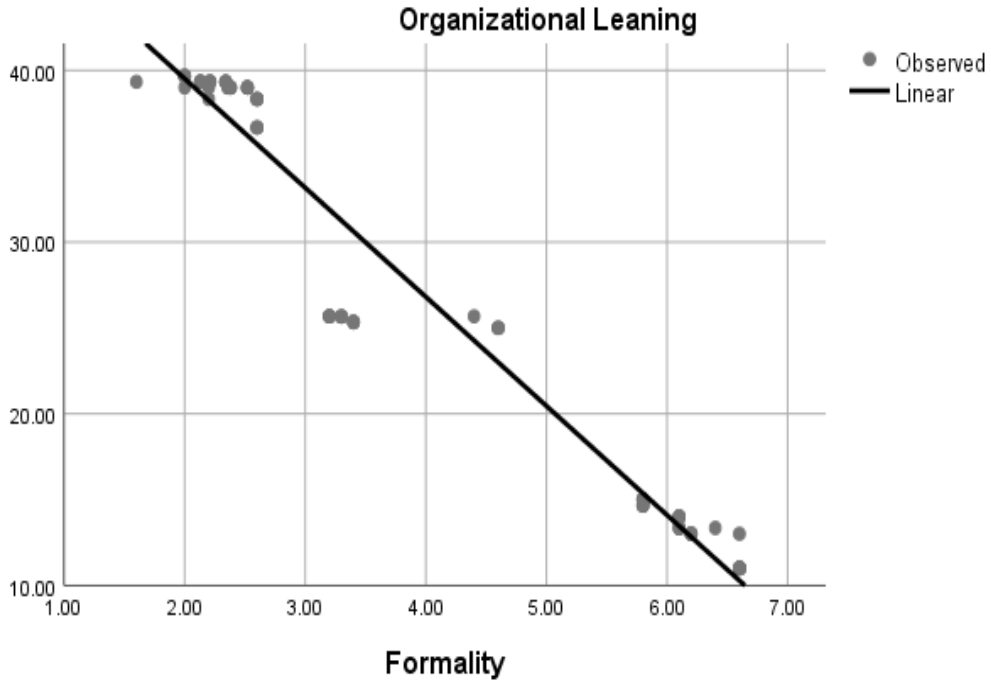
a. Dependent Variable: Organizational Leaning
b. Predictors: (Constant), Centralization of Work, Formality, Complexity of work, Specialization

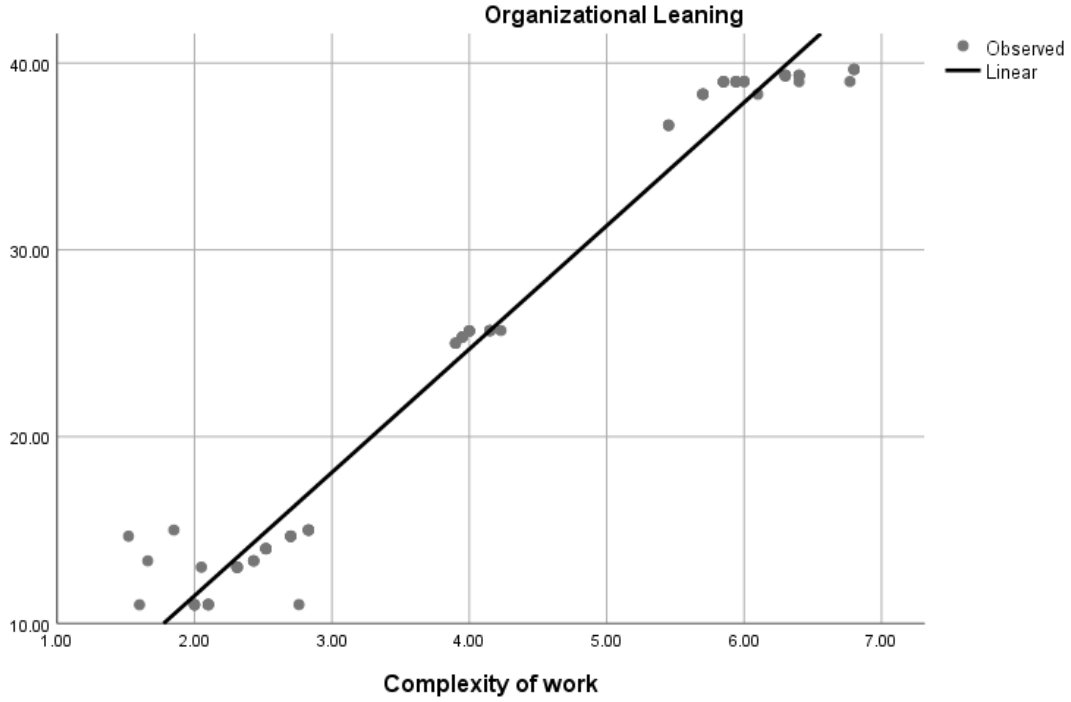
Coefficients[a]

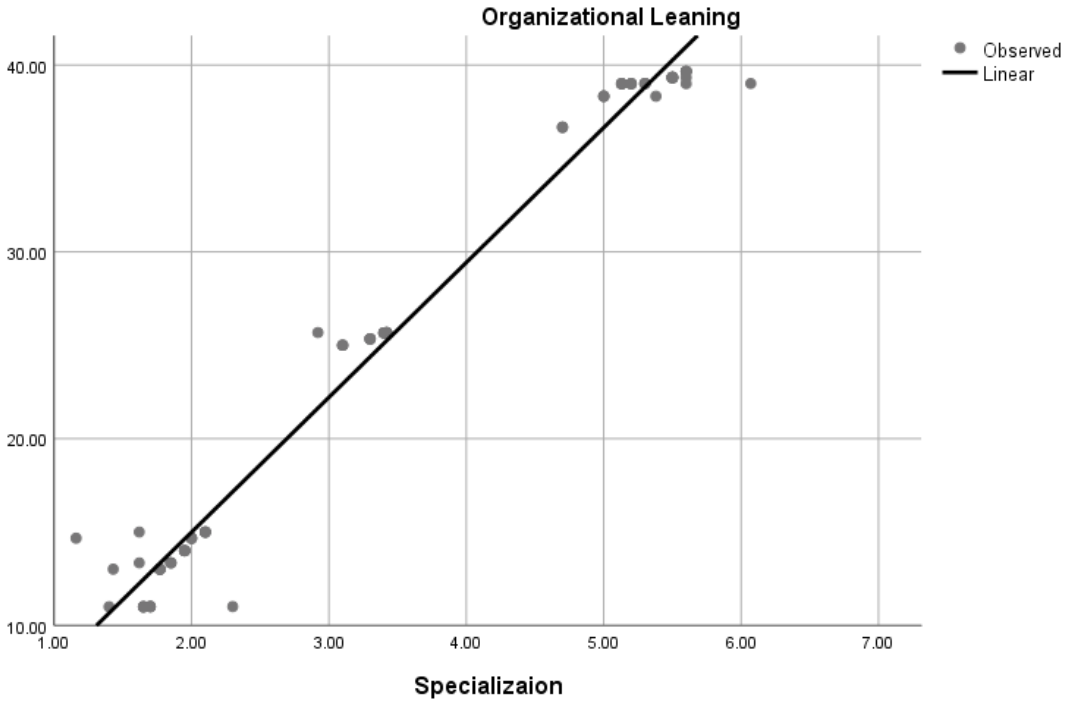
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	48.532	3.304		14.687	.000
	Complexity of work	1.340	.616	.200	2.176	.032
	Formality	-.941	.226	-.145	-4.156	.000
	Specialization	1.904	.733	.261	2.597	.011
	Centralization of Work	-4.808	.421	-.795	-11.413	.000

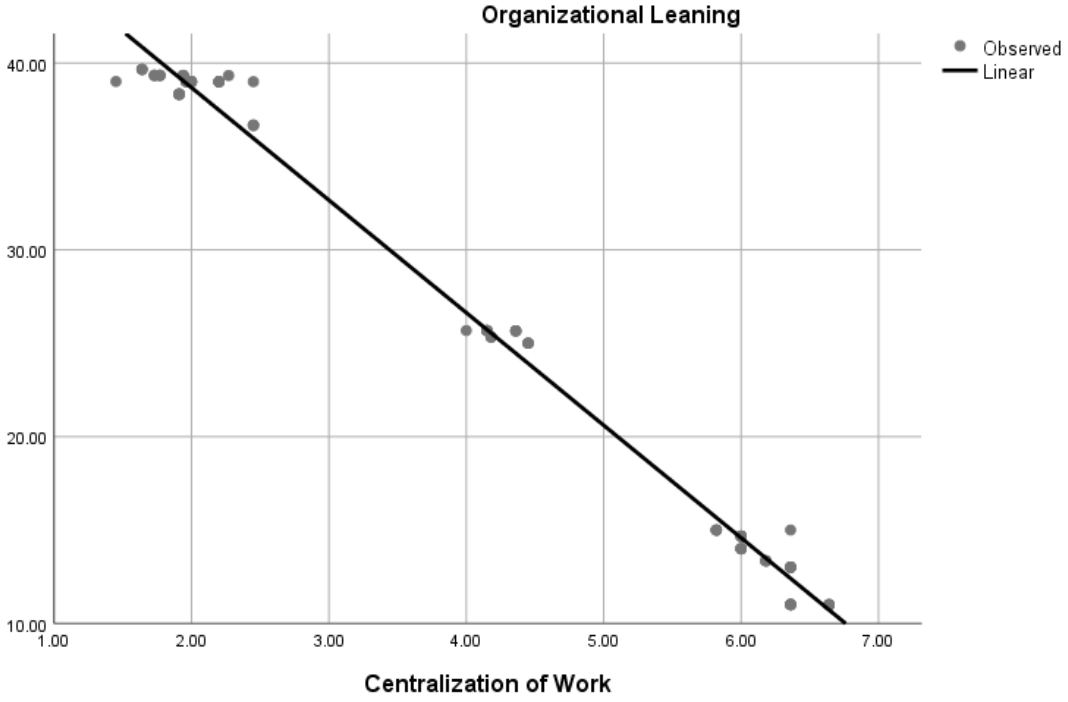
a. Dependent Variable: Organizational Leaning

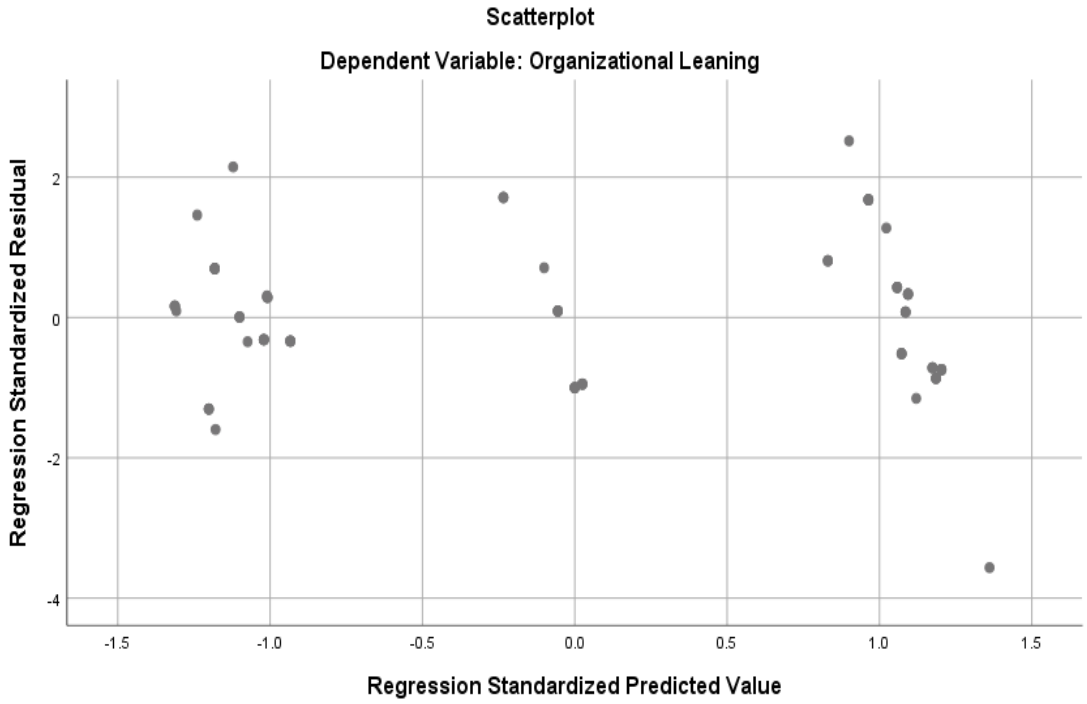
APPENDIX F: Regression Analysis Line Graphs






Organizational Leaning
Observed
Linear
40.00
30.00
20.00
10.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Specializaion


Organizational Leaning
Observed
Linear
40.00
30.00
20.00
10.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Centralization of Work


Scatterplot
Dependent Variable: Organizational Leaning
Regression Standardized Residual
2
0
-2
-4
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
Regression Standardized Predicted Value

APPENDIX G: Descriptives

Descriptive Statistics

	N	Range	Minimum	Maximum	Sum	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Formality	88	5.00	1.60	6.60	359.98	4.0907	.19242	1.80510	3.258	.242	.257	-1.739	.508
Complexity of work	88	5.28	1.52	6.80	372.58	4.2339	.18704	1.75460	3.079	.028	.257	-1.616	.508
Specialization	88	4.91	1.16	6.07	313.01	3.5569	.17163	1.61003	2.592	.065	.257	-1.713	.508
Centralization of Work	88	5.19	1.45	6.64	357.86	4.0666	.20695	1.94139	3.769	-.003	.257	-1.746	.508
Continuous Learning	88	4.67	1.33	6.00	336.72	3.8264	.18532	1.73843	3.022	-.077	.257	-1.679	.508
Inquiry & Dialogue	88	5.00	1.00	6.00	324.05	3.6824	.19207	1.80178	3.246	-.080	.257	-1.646	.508
Team Learning	88	4.67	1.33	6.00	325.07	3.6940	.18489	1.73441	3.008	-.034	.257	-1.715	.508
Embedded Systems	88	4.33	1.67	6.00	330.65	3.7574	.16497	1.54758	2.395	-.008	.257	-1.643	.508
Empowerment	88	4.67	1.33	6.00	331.71	3.7694	.17857	1.67517	2.806	.011	.257	-1.582	.508
System Connections	88	4.67	1.33	6.00	328.72	3.7355	.18821	1.76553	3.117	-.033	.257	-1.688	.508
Strategic Leadership	88	4.66	1.67	6.33	331.36	3.7655	.18308	1.71743	2.950	.044	.257	-1.670	.508
Organizational Leaning	88	28.66	11.00	39.66	2308.28	26.2305	1.25156	11.74072	137.844	-.036	.257	-1.767	.508
Valid N (listwise)	88												