Effect of Knowledge Management on Organizational Performance: Case of Panafric Global Plc

ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
SCHOOL OF COMMERCE

Submitted By: Tizita Workineh

A Research project submitted to Addis Ababa University School of Graduate Studies in partial fulfillment of the requirement for Masters of Degree in Business Leadership

Advisor: Fesseha Afework (Assistant Professor)

September, 2021

Addis Ababa, Ethiopia

Declaration

I, Tizita Workineh, hereby declare that this thesis entitled “Effect of Knowledge Management on Organizational Performance: The case of Panafric global plc” is my work. All information in this material has been obtained and presented under the ethical conduct of university academic rules. I prepared this paper under the guidance of my adviser Fesseha Afework (Asst. prof).

Student Researcher

_____

Tizita Workineh

Statement of Certification

This is to certify that Tizita Workineh has carried out her research work on the topic entitled "Effect of Knowledge Management on Organizational Performance" as a partial fulfillment of the requirement of Master of Arts Degree in Department of Business Leadership. This study fulfills requirements to obtain academic Degree from the university

_____

Advisor: Fesseha Afework (Asst. Professor)

ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

DEPARTMENT OF BUSINESS LEADERSHIP

Effect of Knowledge Management on Organizational Performance: The Case of Panafric Global Plc

By: Tizita Workineh

Approved by examining board

Advisor _____ _____

Name Signature

Internal examiner _____ _____

Name Signature

External examiner _____ _____

Name Signature

Contents

Acknowledgement

First and at most, I would like to thank almighty God for guiding me through the journey I am finishing. My special thanks to my advisor Fesseha Afework (Asst. Professor), for his support and direction in my paperwork.

My appreciation goes to my colleagues for taking the time to fill out the questioner. I am very grateful to my friends, family members, and colleagues for their extended help in the form of encouragement, material, and technical support.

Abbreviations and Acronyms

ANOVA	Analysis of variance
ASYCUDA	Automated System for Customs Data
CFS	Container Freight Station
EFFSAA	Ethiopian Freight Forwarders and Shipping Agents
FIATA	International Federation of Freight Forwarders Associations
IAM	International Air Transport Association
IATA	International Air Transport Association
KA	Knowledge Acquisition
KAP	Knowledge Application
KC	Knowledge Creation
KM	Knowledge Management
KPI	Key Performance Indicators
KS	Knowledge Storage
KSH	Knowledge Sharing
OC	Organizational Culture
OP	Organizational Performance
OS	Organizational Structure
PAG	Panafric Global
PLS	Partial Least Square
SD	Standard Deviation
SEM	Structural Equation Modeling
SME	Small and Medium Enterprises
SPSS	Statistical Package for the Social Sciences
T	Technology

Tables

Figures

Abstract

The Paper seeks to examine the effect of knowledge management on organizational performance in Panafric Global plc. The study specifically sets out to determine a significant relationship between the knowledge management process and organizational performance. It also examines the extent to which knowledge management factors affect the performance of an organization. The target population of this research was 116 employees. The researcher used the probability sampling technique, which is simple random sampling, for distributing the questionnaire. The study used descriptive and explanatory survey research design. The approach used in this research is quantitative approaches. The study's primary data were collected through a questionnaire, and it is the major resource for this study. Then, descriptive statistical methods, multiple regression, Multicollinearity test and Pearson correlation analysis were used, and results would be presented. The findings of this study show that processes and factors of knowledge management, except organizational structure, were not practiced in the organization, the existence of a significant positive relationship between the knowledge management process and organizational performance. It also reveals that knowledge management factors have a positive effect on organizational performance. Therefore, the study concludes that knowledge management processes and knowledge management factors affect organizational performance. Thus, the researcher recommends that Panafric global plc have a knowledge management system that helps the organization create and maintain a strong knowledge management system to achieve sustainable growth. Besides this, the Paper can demonstrate that knowledge management is a crucial driver of organizational performance.

Keywords: knowledge management, performance

CHAPTER ONE

1. Introduction

This chapter deals with the background of the study that shows a brief description of the study. Then it contains a statement of the problem, fundamental research questions, objectives of the study, definition of terms, the significance of the study, organization of the study, and the delimitation/scope of the study. In addition to this, it reveals an overall organization of the study.

1.1. Background of the Study

Organizational management's main objective is to confirm effective and economical use of its various resources like labor, capital, materials, energy, and data to realize aggressiveness and increase productivity. In today's rapid technological change, companies constantly struggle to maintain competitive advantage through market differentiation by providing superior products and services. Among various methods, the management in organizations is increasing their focus on employee's know-how, past experiences, and expertise to excel in achieving their goals. Additionally, improving the communication among employees and changing the organizations culture to a share what you know integral in today's organizations. Without any doubt, Knowledge has become a vital asset for production, next to labor, land, and capital (Sher and Lee, 2004).

Still, intellectual capital will be shifted from the professional worker to another colleague. Tacit Knowledge gained from personal experience is more challenging to store, reuse, and extract from individuals. It is residing within people, so it does not express by others. When there is skilled employee turnover in the organization, Knowledge in the employees' minds is lost (Kovačič et al., 2006). KM as a strategic management tool that has to do with how organizations map out strategies to effectively work or plan to work with KM (Greiner et al., 2007).

The ultimate goal of managing knowledge is to increase profit by improving the efficiency of operations, increasing the quality and quantity of innovations, and enhancing competitiveness. However, this desired benefit cannot be achieved without knowledge collected being effectively applied within the organization. Therefore, employees at all levels of an organization need to systematically utilize the knowledge available at different points of their activities, such as decision making. The organization's ability to apply its knowledge to critical business activities serves as the key link between the business goals of a KM program and its actual, realized benefits. Reusing knowledge inevitably requires the active participation of knowledge workers, typically organized in workgroups in an organization (Hislop, 2013).

Mavodza and Ngulube (2011) stated that the essential part of an organization is getting enough awareness about KM operations by considering KM practices. The following are knowledge management practices: knowledge generation, knowledge acquisition, knowledge organization, knowledge storage, knowledge transfer, knowledge sharing, and knowledge retention.

Knowledge has displayed the achievements of the objective. Therefore, it is an essential resource to the organization (Wenger et al., 2002). Managing knowledge worldwide has a necessary and high-priced input in managing sustainable development programs (Ngulube, 2002). Knowledge management systems have a significant effect on the effectiveness of strategic decisions that will lead to a better organizational performance. (Shannak, 2010). The organization wanted to interpret precisely the type of knowledge which will give a competitive advantage.

The main objective of Knowledge Management practices in organizations is to confirm company performance. Organizations achieve the practices of KM by protecting critical knowledge at all levels, applying the stored knowledge when there was a related situation happened, unifying internal knowledge with external knowledge to get combined effect, and gaining very important knowledge constantly, eventually by using internal experiences and external environment new KM practices can be developed.(Monavvarian et al., 2011). As Mavodza & Ngulube (2011) stated, an organization must have a definite understanding of what KM means to its operations by considering using KM practices.

Most organizations have a challenge of supporting themselves by seeing the needs of knowledge-constrained economies and considering the importance of knowledge and management. The researcher tried to assess if knowledge management has a significant impact on the performance of PAG. This paper evaluated to what extent the knowledge management process and knowledge management factors affected the organization's performance. Based on the findings, the study will propose suggestions for improving the existing knowledge management practice at PAG.

1.2. Background of the Company

Panafric Global Plc is a freight forwarding company founded in 1993G.C in Ethiopia. The company offers a value-added service including international freight forwarding, document preparation, cargo insurance provision, intermodal trucking, customs formalities, freight consolidation, and international trade management and consulting. PAG works diligently to meet and exceed customer's expectations.

The company has seven branch offices located in different areas of the country including the office in Djibouti and has 163 permanents plus 30 temporary employees. The company owns 21 40ton capacity trucks and it has a long-term contract with truck associations with a capacity of +600 trucks in total. PAG also owns a warehouse & CFS Consolidation center of 3000 sq. meter and a new 7000sq meter under construction. It has direct access to the Ethiopian customs portal system, ASYCUDA ++, from branch to all branch office and it is a member of IAM, IATA, FIATA, EFFSAA, Cross Traders Africa etc.

1.3. Statement of the Problem

When an organization needs a piece of essential information for unique issues in the organization, they find out to retrieve the required information either from the knowledge that exists within the organization or in employees' heads. However, they may be managing their knowledge. Unfortunately, KM sometimes faces a strong barrier (Burrows et al., 2005). The problem is organizations do not know what they know (William et al., 2012). In other words, they are often unaware of the knowledge that exists within their organization already (Nevo et al., 2012).

Employees (knowledge holders) possessing particular skills and expertise could be invaluable to both colleagues and managers within the same organization. Those who could use this knowledge do not even know these knowledge-holders and their knowledge exist (Nevo et al.,2012).

Ann et al. (2013) state that the development of intellectual capital development (knowledge management) is not shown in the organizational financial statement, but it has the power to contribute the profitability and competitiveness of the organization. Organizations fail to improve the knowledge management process if the knowledgeable employees left the organization either intentionally or not, without taking the experts knowledge on the database. The knowledge is in employees' minds, so the organizations have to identify employees who have essential knowledge that is vital to their organization. So, organizations lack a specific benefit from the knowledge resource.

The researcher has observed that there are problems organizations are facing, such as people are not willing to share their jobs knowledge and also indignant towards the company (because of shortage of time, executives don’t provide such knowledge culture and make them feel about consequences that will cost them their jobs. Moreover, most employees doing a task are not repetitive, so most of them could not adopt the actual learning which the executives give. Because of the above reasons most newly employed worker faces difficulty to adapt the work flow of the organization.

In addition to this, the common reason is the required knowledge doesn't available within the organization, sometimes members of the organization fail to share what they know, employee turnover, retirement, and mobility of experienced and knowledgeable professionals lead to loss of knowledge since the company doesn't facilitate the sharing of knowledge with others, even professional that stays within the company the full context of their knowledge is not realized and utilized because the company does not create formal and informal opportunities for the individuals to share their knowledge with others in the organization, lack of proper knowledge management (original memory loss and brain drain), professionals who got training that is prepared by external organizations the employee are not sharing what they get from the training when they come back to the organization.

The researcher believes that the study is reliable in addressing gaps in how knowledge is created, shared, documented, communicated, and secured and seeks to improve knowledge management. When key employees depart from the company, the organization hires a new employee who has less knowledge about the logistics market. Furthermore, the experienced employees leave the company and join other competitor's companies. This is a huge problem for the business organization in general and the logistics industry like PAG. Therefore, this study attempted to work on such untouched empirical evidence in the case of PAG.

1.4. Research Questions

The following research questions which would address in this study are as follows:

1. What is the practice of KM at PAG?
2. What are the barriers which impede knowledge sharing in the organization?
3. What are the benefits of knowledge management and sharing practice in the organization?
4. What is the Effect of Knowledge Management on Organizational Performance?

1.5. Objectives of the Study

1.5.1. General Objective

The general objective of the study is to examine the effect of knowledge management on organizational performance in the case of PAG.

1.5.2. Specific Objective

The specific objectives of the study are: -

1. To identify existing KM practice in PAG.
2. To determine the barriers of knowledge sharing in the organization.
3. To distinguish the benefits of knowledge management and sharing practice in the organization.

1.6. Significances of the Study

This study attempted to investigate the current knowledge management practice of PAG and to propose a knowledge management strategy to manage knowledge in the organization. Hence, the PAG management and employees can make use of the output of this study. In this regard, it is used to solve the existing problem of the organization in relation to the challenge of capturing tacit knowledge and retaining and managing knowledge created in the organization.

The researcher also believes that this study contributes to the management of knowledge in the freight forwarding organization. In addition, it helps the organization under study for retaining the tacit knowledge of experienced employees and developing a detailed knowledge management strategy in different periods based on the result of this research. Moreover, the researcher also believes that the study can also be a ground work for other researchers to carry out further work in the area. Thus, the study aims to examine the effect of Knowledge Management (Creation, Acquisition, Storage, Sharing, Application & organization culture, organization structure, and technology) on Organizational Performance.

1.7. Scope of the Study

The main focus of this paper is to investigate the effect of knowledge management on organizational performance. This study is based on previous studies and theoretical literature on Knowledge Management Practices (Creation, Storage/retrieval, Sharing, and Application) and KM factors (organizational structure, cultures, and technologies).

1.8. Limitations of the Study

The main intent of this study is to examine the knowledge management practice in PAG, including all its Branches, and propose a general KM strategy. The research finding would be more fruitful if it is conducted widely by including other different freight forwarding organizations in different regions of Ethiopia. But due to time, labor, and money constraints, it is out of the reach of the researcher to include other freight forwarder organizations.

1.9. Definition of terms

Knowledge: is a coalition of data and information. Besides this, it adds the opinion, skills, and experience of experts. Knowledge is an important asset that is helpful for decision-making. in organizational terms; generally, knowledge is practical skill or expertise, applied information, information with judgment, or the capacity for effective action. Different types of knowledge are tacit, explicit, individual, and collective. Naturally, knowledge works as a link between people. (Serrat, 2017).

Knowledge activities: are the most broadly used by an organization, sometimes called the knowledge life cycle or knowledge value chain. Knowledge activities are identifying, creating, storing, sharing, and applying knowledge (Serrat, 2017).

Explicit knowledge: Knowledge that can be compiled in formal systematic language and shared in discussion or writing. The following are examples of explicit knowledge a telephone directory, an instruction manual, or a report of research findings (Serrat, 2017).

Tacit knowledge: is personalized knowledge that resides in the minds of people. Tacit knowledge is often difficult to put into words or otherwise communicate than explicit knowledge. It can be shared from the experts to other employees through discussion, storytelling, and personal interactions. Dimensions of tacit knowledge are the technical dimension and the cognitive dimension. The technical dimension is a kind of informal personal skills, sometimes called know-how. The cognitive dimension is composed of beliefs, ideals, values, schemata, and mental models ingrained in individuals and often taken for granted (Serrat, 2017).

Knowledge management: is the systematic management that helps people in the organization by identifying individual and collective knowledge resources. The flow of Knowledge resources is the process of identifying, creating by supervisors or top management teams, storing knowledge manuals for accessing easily, applying and managing the stored knowledge for benefit of the organization. Thus, knowledge management combines information management and organizational learning (Serrat, 2017).

Organizational performance: comprises the organization's goal and objectives and is measured parallel with the actual output. That is to say, organizational performance compared the actual results against the proposed outputs. (Market Business News, 2020).

1.10. Organization of the Study

This study encompasses different subdivisions. Background of the study and the company included in the introductory part of the paper. Statement of problem section contains the main problem of the study by citing related previous studies from different sources. There are two sections of objectives enlightened in the study, i.e., general and specific objectives of the study. The limitation and scope of the study are included in these sections. Different knowledge management terms are defined in this study. In addition to this, the significance of studies for different organizations, users, and shareholders explains in this section. The second chapter presents the review of literature, which is relevant to the topic under investigation. Chapter three deals with research design and methodology. Chapter four covers the results and data presentation, analysis, & interpretation, and the last chapter, chapter five, contains a summary of findings, conclusion, and recommendation.

CHAPTER TWO

2. Literature Review

2.1. Theoretical Review

2.1.1. Definition of Knowledge

Knowledge combines internal & external experience, the organization's values, appropriate information, and professional awareness that form the background for new experience and information. Knowledge invents and is put on in the minds of people who have knowledge. It is express as archived documents, practices of knowledge, and norms (Monavvarian & Kasaei, 2007).

Two forms of knowledge are tacit knowledge and explicit knowledge. It has an impact on the quality of decisions as well as generated and organized efficiently. Tacit knowledge cannot be pronounced in words. Besides this, information that progressed from experience is difficult to express and share with others & formalize (Kreitner & Kinicki, 2010). Knowledge exists in the minds of humans, behavior, and thought (Monavvarian & Kasaei, 2007).

Tacit knowledge is highly personal, context-specific, and is difficult to formalize and communicate or transfer from one person to another by the process of writing or verbal expression and is not captured by language or mathematics and also difficult to reduce to writing and is made up of mental models, values, beliefs, perceptions, insights and assumptions (Davenport et al.,2000). In contradiction, explicit knowledge can be shared in documents, in numerical reports, and verbally. The information of explicit knowledge is put in words and described to others (Kreitner et al., 2010).

2.1.2. Knowledge Management

Individuals' knowledge consists of intangible awareness, learned facts, and information manifested as ideas, judgments, talents, root causes, relationships, perspectives, and concepts (Kovačič et al., 2006). Knowledge resides in the individual's mind. Only when it is articulated and captured, and shared becomes encoded in Organization processes, documents, products, services, facilities, and systems provided that the employees intend to share what they know. Knowledge creation is integral, as knowledge is the only sustainable competitive advantage resulting from learning.

Furthermore, the creation and transmission of knowledge are seen as strategically significant as fundamental processes that determine organizational learning abilities and innovation (Paz et al., 2007). Although human knowledge is intangible, dynamic, and challenging to measure, no organization can survive. Accordingly, organizations should introduce incentives for their employees to share what they know and capture and retain that knowledge for organizational future use.

KM should have a fertile ground for knowledge creation. On the other hand, knowledge management involves the acquisition, storage, retrieval, application, generation, and review of the knowledge assets of an organization in a controlled way (Watson, 2003).

2.1.3. Types of Knowledge

Chen and Xu (2009) recognized two main categories of Knowledge: Explicit and Tacit. According to the British philosopher, Polanyi (1958), explicit knowledge mainly refers to structure knowledge expressed by text, images and symbols, which can be taught verbally and learned by textbooks, reference materials, databases, etc. Tacit knowledge only exists in people's minds, which is difficult to express by words, symbols, images media.

Knowledge management is capturing, developing, sharing, retention, and effectively using organizational knowledge. Organizational knowledge has two types Tacit and Explicit. Tacit knowledge is in people's minds and results from past experiences, know-how, expertise, etc., and cannot be captured and shared easily. On the other hand, explicit knowledge is embedded in the organization's processes, routines, books, images, symbols and can be easily accessible and available to whomever is seeking specific knowledge. The management of explicit knowledge is relatively easy; information systems play an integral part in capturing and retaining data and information. Explicit knowledge gets through teaching, training, and it is the basis for innovation because of the relative simplicity of its availability to information/knowledge seekers. On the other hand, tacit knowledge management is relatively complex and requires different techniques for its creation, articulation, capture, dissemination, and retention. Tacit knowledge contains many knowledge cheats such as know-how, experience, perspective, and values, which implies more innovative ideas, which constitute the core competitiveness (Serban & luan, 2002).

2.1.4. Knowledge Management Practices

Lee & Yang (2000) stated that Knowledge Management comprises knowledge distribution, knowledge combination, knowledge protection, knowledge innovation, and knowledge acquisition. In comparison, Alavi & Leidner (2001) combined the above knowledge dimensions into the knowledge "creation" process and added knowledge "application." Another definition for Knowledge Management is by Cormican & O'Sullivan (2003); they recognized five generic knowledge management activities: knowledge generation, knowledge representation, knowledge storage, knowledge access, and knowledge distribution. It can also be divided to Responsiveness to knowledge, Knowledge acquisition, knowledge dissemination, and Knowledge utilization (Chen et al., 2009). Knowledge management includes processes to identify, create, define, capture, store, organize, transfer, disseminate, use, review, share and apply knowledge in an organization (Yousuf, 2014).

Knowledge creation is generating new knowledge; it consists of internal creation through accumulating and recombining existing knowledge from scatters sources and external acquisition from outside of the knowledge network. Where these two ways supplement each other; knowledge acquired from external sources creates an opportunity for knowledge integration, at the same time; with more knowledge accumulated internally, firms increase their absorptive capability (Li et al., 2012). It is generating new knowledge through experimentation, lessons learned, creative thinking and innovation (Ranjbarfard et al., 2014).

In addition to that, Knowledge acquisition is an ongoing and dynamic process that involves the capability to innovate novel ideas, insights and solutions and incorporate it within the organization (Jayasingam et al., 2013). Knowledge can be gained through individual learning, scanning of the external and internal environment and hiring new employee (Lim et al., 2000).

Knowledge creation is sharing and distribution of individual experience. It occurs between individuals and organizations. to create new knowledge, sharing knowledge between individuals is the basic mechanism that brings differences among them. Although the source of knowledge comes from sharing knowledge between organizations, it is essential for knowledge acquisition (Gold et al., 2001).

The process of knowledge storage is evaluating, identifying, capturing appropriate and valuable knowledge, and preserving it in the depository of the knowledge network. There are different types of tasks used to store knowledge. one is collecting knowledge from other locations. The second is offering knowledge to increase the availability of all participants in the network of knowledge, eventually coordinating data among the different storage locations. The valuable asset in the organization is when the stored knowledge is accessible for all and easily retrieves data (Li et al., 2012).

The distribution of the existing knowledge in the organization is knowledge sharing. (Ranjbarfard et al., 2014). It contains a mixture of social standards, tacit knowledge, experience sharing, ordinary expectation, and attitude and behaviors (Gold et al., 2001).

Knowledge sharing is used to expand the needed information through the exchange process and allows both parties in the organization. Future development and growth in the organization are directed by sharing knowledge. it allows discussing practices among the individuals. (Azudin et al., 2009). one of the knowledge-sharing mechanisms is through personal communication and training (Lim et al., 2000). knowledge can be shared through teaching, searching from different sources, broadcasting, and other social activities (Ranjbarfard et al., 2014).

The knowledge application process is concerned with the advantage of knowledge used to adjust strategic direction, improve competency, and solve new problems (Gold et al., 2001). the benefits of knowledge application are using knowledge in actions, for decisions, solving different kinds of problems, and assisting the routine work (Ranjbarfard et al., 2014).

2.1.5. Dimensions of Knowledge Management

2.1.5.1. Top Management Commitment

Organizations often regard deployment of their KM cycles as one of the key strategic initiatives, which can potentially provide the necessary basis for sustainable competitive advantage. There are numerous methodological approaches for KM Deployment, predominantly driven from KM software vendors or consulting firms promoting their services. The lack of an end to end holistic approach for KM deployment that is grounded in a sound methodological foundation is clearly evident in the current KM market place (Akhgar & Yates, 2011).

Organizational and managerial issues in KM come up with managerial processes for capturing and distributing knowledge. Besides, these processes need to be improved continuously to become more effective and efficient. The organization's structure has knowledge management systems that are flexible and adaptive. "It has to be designed for flexibility instead of rigidity so that they encourage sharing and collaboration across boundaries within the organization and across the supply chain" (Gold et al., 2001).

Management support and commitment for KMS use in an organization can be seen in the funds allocated for the systems resources, training, and infrastructure to support KM initiatives. Management's commitment to KMS use can be demonstrated by having managers lead and support system use, not just by promoting the system itself. The management support and commitment factor have been found to directly influence the extent of KMS use. In addition to contributing to the extent of KMS use in an organization, management's support and commitment are also recognized as important factor in determining the successful promotion of a knowledge- sharing culture within an organization. An exploratory study of KMS effectiveness mechanisms describes how an employee's perception of management's commitment can influence the knowledge-sharing culture. (Aurum et al., 2008; Butler et al., 2007).

Numerous KM practitioners have also attested to this argument by suggesting that management was responsible for driving the required cultural and systems changes to increase KMS usage. Further, management support and commitment were also reported as factors influencing the level of knowledge content quality. The management commitment exhibited by senior leadership affects the quality of shared knowledge by spearheading the task of developing organizational- wide taxonomy of knowledge that can feed into a KMS. In other words, organizational strategies define and classify knowledge by management support and commitment. (Subramaniam et al., 2009).

2.1.5.2. Knowledge culture

The impact of culture on organizational performance has a debate in management and economics. Cultural diversity is a "double- edged sword" which can have a positive or negative impact on performance. Positive effects of cultural diversity are related to increased synergies and spillovers, which arise from the association of different viewpoints, and increased opportunities for knowledge recombination. On the other hand, negative effects of cultural diversity are mainly related to communication problems and problems in conflict resolution. (Milliken et al., 2003).

Knowledge sharing or knowledge dissemination refers to the act of distributing both newly created or acquired knowledge with different level or group of the organization (Dalkir, 2005). In the similar argument of Maier (2007) knowledge sharing involve publishing knowledge that can then be distributed to knowledge seekers. Knowledge publication involves the codification of knowledge, i.e., in a general sense, putting knowledge in various forms that can be stored and thus retained, leveraged and transferred.

Organizational culture can be thought of as a relatively rigid tacit infrastructure of ideas that shape not only our thinking but also our behavior and perception of our business environment. The workflows in the organization are guided by organizational culture, and members work based on the established guideline. It is inflexible mainly due to our standards. Knowledge management research indicates the importance of culture that affects the outcomes as those creating a supportive organizational environment for innovation; several practices relating to cultural barriers have been identified in the literature. (Chen & Huang, 2007).

In the process of sharing knowledge, people are the primary entity. This is because knowledge usually exists in the mind of individuals. The process of sharing knowledge often starts at the individual level, and expands to the group level and the organizational level. Such a process of sharing organizational knowledge facilitates the exchange of working experiences, technical know-how and individual insights between and among individuals. Knowledge sharing increases the organizational knowledge and improves the capability of its employees for performing their jobs better (Xiong & Deng, 2008).

Culture is exhibited in the visible aspects of the organization, like its mission and espoused values. Besides, culture shows how people act, expect each other and share their information (McDermott & Dell, 2001). Although culture is a conglomeration of essential organizational elements that serve as a foundation Senge (2006), and nurturer staffs intention to share their information and knowledge requires changes in corporate culture (Bureš, 2003).

2.1.5.3. Information Communication

Key knowledge of a company has to be disseminated, shared, and used within the whole company so it can become an asset whereby the performance can be enhanced. Knowledge transfer means to convey and to diffuse knowledge among different organizations or within one organization. Regular meetings, training, and personal contact are ways to convey knowledge. The manners to diffuse knowledge differ depending on the form of knowledge that should be transferred. Explicit knowledge can easily be transferred by archives, books, databases, and groupware technology. Whereas transferring tacit knowledge involves personnel movement and individuals that collaborate with each other. Collaboration can take place in many ways such as on-the-job- training, job rotation, and building structures such as cellular organizations and teams. (Lahti & Beyerlein, 2000).

Communication refers to the process of information sharing between individuals/employees of the organization. To achieve organization's objectives, the practice of effective communication must be there between Managers and practitioners to support employees. Different researchers wrote that effective communication influences the organization to move systematically towards employee participation, customer satisfaction and improve organization performance (Ooi et al., 2007).

Cultural factors such as collaboration and trust are essential operations for managing knowledge effectively in a firm. Developing cultural factors is necessary for a firm's ability to manage its knowledge effectively. The basic assumption was that there was a statistically significant difference in perception of KM for two groups of respondents for at least one KM process, namely KM culture.

There are four dimensions of knowledge management culture including:

1. Knowledge creating
2. Knowledge learning
3. Knowledge sharing
4. Knowledge cooperating

Effective project organization implements a "knowledge-friendly" culture, which is the most challenging constraint. In order to successfully implement knowledge management (KM), the most important thing for companies is to nurture the culture associated with creating, sharing, and utilizing critical knowledge. Culture has several relevant components, and it is a most difficult constraint that knowledge managers must deal with. (Arsenijevi, 2009).

1. **First:** One is the positive attitude as well as orientation to knowledge. In these aspects, employees are self-motivated, curious about getting intellect, and explore knowledge creation activities. Besides this, the managers encourage these actions and provide different incentives to them to carry on this approach.

2. **Second:** is knowledge does not transfer in the company. Most employees have not a willingness to share their job knowledge and not being happy towards the company. They do so because executives do not provide such knowledge culture and make them feel about the consequences that will cost them their jobs.

3. **Third:** the component is in comparing the type of knowledge management with the practiced culture. So far, this study's theory is concentrated on the current knowledge, its transfer practice, and its management part.

Now different theories step further into the creation of new knowledge. Knowledge creation is a process through which the organization expands the individual knowledge and crystallizes it to form new knowledge. Organizational knowledge has four types of modes. The outcome of the interaction and conversation between explicit and tacit knowledge is organizational knowledge creation.

1. **Socialization (Tacit-to-tacit):** is the sharing experience that generates implicit knowledge such as shared mental models and technical skills. Socialization works for teaching everyone in the organization the "way we do things around here".

2. **Externalization (Tacit to explicit):** triggered by dialogue, implicit knowledge becomes explicit during a period of collective reflection through sharing of analogies, stories and models. The exchanges between tacit to explicit become carriers of knowledge and also carriers that can transfer general principles.

3. **Combination (Explicit to explicit):** a combination of different types of explicit knowledge leads to the creation of new explicit knowledge. This is a common type of knowledge transfer that is used learning in schools and instructional programs. Organization members combine their explicit knowledge by sharing reports, memos, and other such documents. Businesses also use data warehousing and data-mining techniques to discover trends in seemingly disparate data.

4. **Internalization (Explicit to tacit):** is the process of actual learning by repetitively doing a task so that the explicit knowledge of applied principles and procedures becomes absorbed as implicit knowledge of the individual's style and habit.

2.1.5.4. Education and Training

Knowledge management can also develop and combine into educational institutions' structures and processes to improve their performances. Five areas benefit knowledge management in educational institutions: research, curriculum development, student and Alumni services, administration, strategic planning, and traditional classroom enhancement.

Kidwell et al., (2001) argued that some of the application areas of knowledge management in the curriculum development process are Curriculum design & revision efforts, knowledge of teaching and learning (with technology), Pedagogy and assessment techniques, student evaluations, etc. Some of the benefits identified are enhancing the quality of the curriculum, improving responsiveness to student evaluations, leveraging the best practices, improving teaching and learning, and monitoring outcomes.

Furthermore, Petrides and Nodine (2003) stated several implementation areas where knowledge management practices are useful in educational institutions. One of the areas is enabling educators to create and represent quality knowledge for students to advance and improve their learning. Training relates to the acquisition of specific skills or knowledge to perform actively. one of the major objectives of training programs is to educate employees on performing particular activities or a specific job.

The aim of knowledge management is to support learning organizations that provide all employees with access to corporate memory so that both the individuals and organizations as a whole improve. Re-use of knowledge is one all the time during knowledge sharing, interaction and it benefits an individual who sought the advice of a more experienced colleague. Also, re-use of knowledge provides long-term advantages; thus, necessary systems are critical for harnessing knowledge (Frappaolo, 2006).

2.1.5.5. Competitive Benchmarking

Benchmarking has defined the companies or industry's best practices that will lead to superior performance or organizational success (Chi Lai et al., 2011). As Drucker (2003) considers benchmarking to be one of the latest tools to obtain information on productivity. He also believes that all organizations can do everything equally. Equalizing the quality according to the leader in the industry is an essential condition for competitiveness.

Benchmarking is the process of identifying, understanding, and adapting outstanding practices from organizations. Besides, it is helpful for an organization to improve its performance. It is an activity to find best practices and high performance. At the same time, it measures actual business operations against those goals (Kumar et al., 2006)

2.1.6. KM and Organizational Performance

Organizational performance (OP) means to what extent the organizational goals and objectives can be achieved (Janepuengporn & Ussahawanitchakit, 2011). Many studies were conducted to test the relationship between KM and OP. Previous scholars investigated the organizational impact of knowledge management practices. The study argued that knowledge management practices, including communication, create new knowledge, acquisition, policies, KM strategies, and training. Knowledge management affects organizational performance dimensions (financial performance, new product success, customer satisfaction, market share) positively among all the dimensions. However, it was revealed that the highest impact was on the success of a new product, and training was the strongest affecting dimension on OP.

In order to help organizations including academic ones (e.g., Universities) to correctly choosing the strategies for investing in knowledge resources, an empirical study was conducted in the Isfahan universities in Iran, presented that knowledge management resources such as organizational structure and knowledge application are positively affecting OP while other resources such as technology and knowledge conversion are not (Fattahiyan et al., 2013).

It is likely to address that KM strategy could include knowledge transfer concentration, open mindedness orientation, skill sharing and integrated value knowledge (Janepuengporn & Ussahawanitchakit, 2011).

The most significant positive relationships from the whole KM processes performance indicators are factor strategy and leadership, among knowledge management enablers (Ho, 2009). Similar previous studies were conducted to reveal the influence of KM resources on organizational performance with the same dimensions. The results were supported along with organizational structure and knowledge application and weren't the case with technology and knowledge conversion (Emadzade et al., 2012; Smith et al., 2010). We can induce that not all KM resources contribute directly or positively to OP. Each resource is not linked to performance.

It has been found that a non-expected percentage of employees have no interest in knowledge sharing and retrieving. Most of them prefer to depend on their knowledge and intuition (Shannak, 2010). Since the culture can be considered a KM practice besides processes, human capital, and strategy, there is a strong need to construct the culture to ease sharing of knowledge between employees. Other researchers also address that well-constructed culture will support the knowledge management process and thus improve organizational performance.

Other factors affect organizational performance, such as competence, competitive advantage, operation improvement, and potential growth. Knowledge management strategy significantly affected the last factors in clothing manufacturing in Thailand and thus it affects OP positively (Janepuengporn & Ussahawanitchakit, 2011). Although they found that, there is no significant relationship between KM practices and financial performance, researchers have also found that they can generalize another rule; there is an existence of a direct significant relationship between KM practices and Organizational performance which includes the financial performance (Zack et al., 2009).

As Shannak (2010) focused on the engineering field; they indicated that knowledge management systems significantly affect the effectiveness of strategic decisions that will lead to better organizational performance. While Mohammed & Jalal (2011) Focused on the banking sector and argued that organizations need to develop their knowledge management processes to reach better decision creations and thus better organizational performance. The knowledge management system impacts decision-making related to knowledge management practices, including what we have mentioned previously (IT infrastructure, HR, shared knowledge, and culture).

2.2. Empirical Review

Several studies have been carried out to explore the effect of knowledge management on the performance of an organization.

Mohamad et al., (2013) state that structural equation modeling (SEM) for small and medium enterprises examines the influence of knowledge management practices on organizational performance in Iran. As per the findings of a research paper, the significant factor loading on knowledge management are knowledge creation, acquisition, storage, and implementation. These KM process significantly affects knowledge management. Besides this, organizational performance impacts are innovation, work relationships, staff performance, productivity, financial performance, and customer satisfaction. The conclusion of the study recommends that knowledge management practices directly influence the organizational performance of SMEs.

Zwain et al., (2012) conducted a study on the impact of knowledge management processes on Iraqi higher-education institutions' academic performance. The two analysis methods, correlation, and regression data analyses, would test the hypothesis result. The conclusion suggested that Iraqi higher-education institutions can get benefit from knowledge management processes. Furthermore, the study suggests that decision-makers should acquire in-depth knowledge about the impact of knowledge management processes.

William et al., (2012) carried out research trying to fill the research gap surrounding that particular knowledge management process called knowledge identification. The findings show that organizations perceive knowledge identification to be important, but the practice of knowledge identification has not reached mainstream adoption yet. The survey findings also reveal two opposing approaches organizations take in practicing knowledge identification: Proactive Knowledge Identification and Reactive Knowledge Identification.

Ahmad et al., (2013) employed a survey method in finding out the relationship between individual's absorptive capacity and knowledge acquisition behavior among engineers in the electrical and electronic sector in Malaysia. Measuring of the relationship of variables are Partial least square (PLS) and structural equation modeling (SEM). The study found that individual absorptive capacity has a partial influence on employees' knowledge acquisition.

Abdel et al. (2012) studied the role of knowledge management in enhancing organizational performance in some Egyptian organizations. the required information was collected by questionnaire. The result shows that all elements of knowledge management have a positive and significant relationship with all performance measures at a 1% level of significance; That is to say; there is a significant correlation between knowledge management capabilities and organizational performance. Finally, Martin (2012) examined the knowledge acquisition strategies and company performance in Young High Technology Company in Germany, using quantitative and qualitative data. Four types of knowledge acquisition strategies in the study are (low- key, mid-range, focus, and explorer). This strategy shows differ in their relation to company performance due to their configuration of knowledge acquisition activities and the type of knowledge acquired.

2.3. Conceptual framework of the study

This paper defines a research framework and presents a conceptual model to analyze effect of knowledge management on organizational performance.

Independent variable Dependent variable

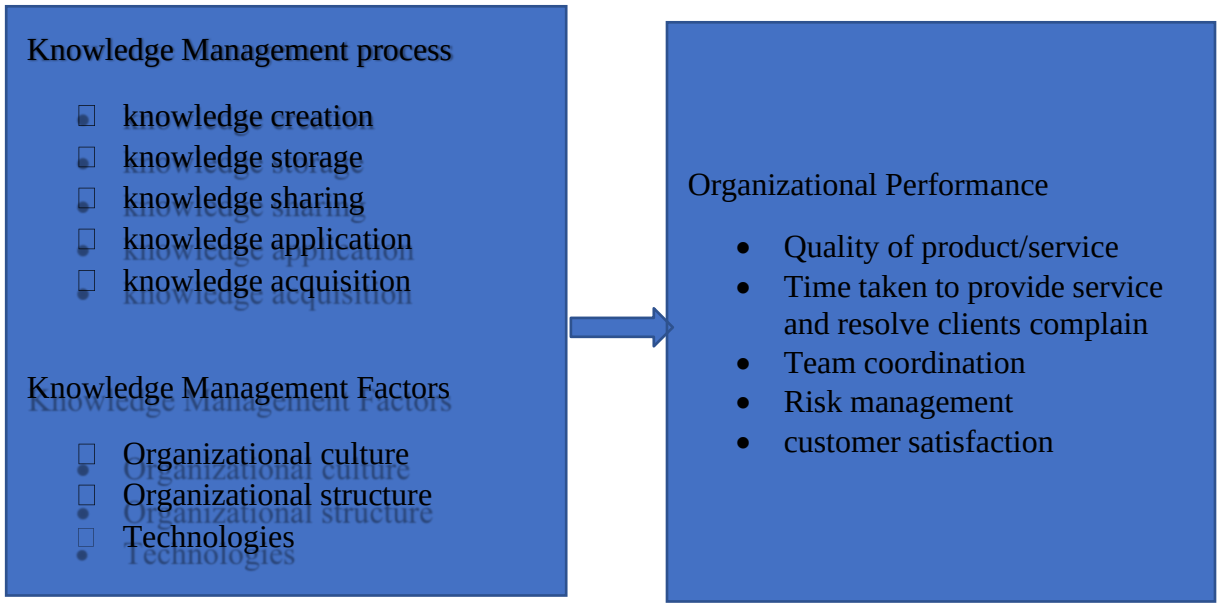

Figure 2.3 Conceptual framework

Source: previous studies and self-prepared

CHAPTER THREE

3. Research Methodology

3.1. Introduction

This chapter focuses on the design and methodology of the research. The sample design, sources of data, data collection methodology, and research instrument & data analysis methods are discussed in this chapter.

3.2. Research approach

The approach engaged in this research is quantitative approaches. The quantitative method is used to interpret the information obtained from the questionnaire.

3.3. Research design/type

The research design employed is descriptive and explanatory research design, as it helps to show the relationship between variables. The study's dependent variable was organizational performance, while the independent variables were knowledge management factors and processes. The quantitative type of data will use to get detailed information on the study.

3.4. Sampling design

3.4.1. Target Population

The populations of this study are employees of PAG. Currently, at the time of the study, the company has a total of 163 employees. From these, 116 employees were considered in this study. The researcher used a Simple random sampling technique applied for questionnaire distribution.

3.4.2. Sampling Frame

The population of this study includes all professional employees working under different departments in PAG.

3.4.3. Sampling technique

The researcher will use probability sampling technique which is simple random sampling for distributing questionnaire because it gives all the individuals in the population equal chances of being selected under each and every department of PAG.

3.4.4. Sample size

The following technique was applied in determining the sample size for the current study. To compute the sample size, the researcher used the below formula. The sample size determination formula for the finite population is stated by (Cochran, 1977).

$$n = \frac{N}{1 + N(e^2)}$$

Where:

n=sample size for finite population

N=Total Population of the study (163)

e=Margin of Error (allowable error) 1=is a constant

Based on the above formula and by using 5% margin of error (the amount of error that the researcher can tolerate), 95% confidence level (tells how sure the researcher can be) from 163 population (permanent employees at PAG). Hence, the accepted sample size of this study is 116.

$$n = \frac{163}{1+163(0.05)2}$$

n=115.80 approximately 116

3.5. Sources of Data

To gather appropriate information, the researcher will use both primary and secondary data sources. The primary data are first-hand information collected from respondents of the company's employees on the effect of knowledge management on organizational performance. It is collected through well-structured questionnaires. The questionnaires are printed physically and distributed to the respondent's employees who have not to mail access, and for the rest respondents the researcher collected all the questionnaires through mail delivery channel.

Further, the secondary data will be obtained from books, files, Panafric's monthly Magazine, a weekly and monthly report of the PAG's different departments, written journals, related literature, and the like.

3.6. Research instrument

For this study, the researcher collected data through questionnaires. The researcher will apply closed-ended questionnaires, organized in a Likert type from Strongly Disagree (1) to Strongly Agree (5). Measuring the two main Effects of KM: knowledge management process and knowledge management factors using a 5 - point Likert scale. The label is given for respondents to express their level of agreement for each item among the scales. In addition, organizational performance was measured by using a performance measurement questionnaire. The questionnaire was prepared to answer research questions stated in chapter one and to meet the research objectives. It is comprised of four parts. Part I questionnaires are to collect the respondent's basic personal information like their gender, age, and level of their education, part II covers the process of knowledge management, part III assessing the factors of knowledge management aspects of the company, while the last part focused on questionnaires to evaluate the effects of knowledge management on company performance.

3.7. Validity

Validity refers to the meaning, relevance, and effectiveness of inferences the researchers made as per the collected data. It refers to how the evidence supports any inference the researchers make based on data they collect using a questionnaire instrument. The questionnaires were drafted from relevant research studies. Suggestions and comments were requested from my advisor and colleagues with Master’s degrees to check the validity of the questionnaire. And, the required changes were made as per the comments secured.

3.8. Reliability

In this study, Cronbach alpha calculation was performed, and it will be used as a checking mechanism whether the reliability of the questionnaires is acceptable or not. Internal consistency (reliability) measured by Cronbach alpha. Zikmud et al., (2012) stated that it measures the internal consistency of items to the concept. Very good reliability has an alpha value coefficient between 0.8 and 0.95. An alpha value between 0.6 and 0.7 indicates fair reliability. In this research, Cronbach's reliability test is used to check the reliability of both the dependent and independent variables. Below is a summary of the result.

Table 3.1 Summary of Cronbach's alpha Values

Variables	**No. of Questions**	**Values**	**Comments**
Organizational performance	16	0.944	accepted
Knowledge creation	7	0.943	accepted
Knowledge acquisition	3	0.948	accepted
Knowledge storage	5	0.944	accepted
Knowledge sharing	10	0.947	accepted
Knowledge application	7	0.966	accepted
Organizational culture	6	0.945	accepted
Organizational structure	5	0.956	accepted
Technology	5	0.949	accepted

Source own survey 2021

3.9. Method of Data Analysis

The collected data processed and analyzed by quantitative techniques. The presentation and organization of findings were easy to comprehend and draw conclusions based on findings. The data obtained from the questionnaire responses were assessed and analyzed using SPSS version 23. After organizing, coding, and defining variables, responses of the cases were entering into the software. Then, descriptive statistical methods, regression, and correlation analysis were used, and results would be presented.

3.10. Ethical Consideration

Ethics had relevance in research work, and the researcher considered ethical issues critically as much as possible. To avoid any issues, all employees that will fill out the questioner will be requested their willingness, and insight will give on the purpose of the questioners. It will be giving consent to respondents that their responses do not disclose to anybody without their permission.

Chapter Four

4. Data Presentation, Analysis and Interpretation

In this chapter, as per the primary data collected, the researcher attempted to analyze and examine the effects of knowledge management on organizational performance: the case of Panafric Global plc. The study deals with the presentation, analysis, and interpretation of data obtained from the questionnaire survey. Statistical analyses were conducted by using SPSS version 23. The researcher applied the descriptive statistical analysis for the measurement of mean, standard deviation, frequency, and percentage. The effect of an independent variable on dependent variables inspected by correlation and regression analysis.

4.1. Response Rate of the Respondents

The researcher prepared and distributed 116 closed ended questionnaires to employees of Panafric global plc. From the total distributed questionnaires 106(91.37%) data were collected and 10(9.43%) were not responded.

Table 4.1 response rate of distributed questionnaires

Target Population	**Total Questionnaire Distributed**	**Questionnaire Returned**	**Not Responded**	**Response Rate**	**Non response rate**
163	116	106	10	91.37%	9.43%

Source own survey 2021

4.2. Demographic Characteristics of Respondents

This chapter provides a demographic profile of PAG employees, which was essential to gain an overall insight into the questionnaire. The demographic analysis was conducted by using frequencies and percentages in the following table.

Table 4.2 Demographic profile of the respondent

Indicator and Category		**Frequency**	**percentage**
Gender	Female	40	37.74%
	Male	66	62.26%
	Total	**106**	**100%**
Age	From 18-25 years	11	10.38%
	From 26-34 years	51	48.11%
	From 35-44 years	29	27.36%
	From 45-54 years	15	14.15%
	Above 55 years	-	-
	Total	**106**	**100%**
Educational Level	Certificate/Diploma	13	12.26%
	BA/BSC Degree	57	53.77%
	MA/MSC Degree	22	20.76%
	PHD	-	-
	Others	14	13.21%
	Total	**106**	**100%**
Position Level	Junior level	16	15.09%
	Middle level	36	33.96%
	Senior level	33	31.14%
	Manager/Director	21	19.81%
	Total	**106**	**100%**
Experience	Below 2 years	10	9.43%
	From 3-5 years	30	28.30%
	From 5-10 years	37	34.91%
	Above 10 years	29	27.36%
	Total	**106**	**100%**
Department	Marketing	13	12.26%
	Operation Administration	9	8.49%
	Operation	18	16.98%
	Finance	21	19.81%
	HR	4	3.77%
	Packing and moving	18	16.98%
	Training and development	4	3.77%
	Transport section	13	12.26%
	IT	6	5.66%
	Total	**106**	**100%**

Source own survey 2021

As shown from table 4.2 above, 66(62.26%) of the total PAG respondents were male, while 40(37.74%) were female. From analysis result the number of male respondents were greater than female respondents.

Refer to the above table, 91(85.85%) of the respondents were under the age of 44 years. Therefore, most of the respondents were young. Besides, employees of PAG were well qualified. From the above data, 57(53.77%) are first degree holders, 22(20.76%) have a master's degree, 13(12.26%) have a diploma or certificate, and 14(13.21%) have other qualification. Most of the respondents in PAG 85(80.18%) were in non-managerial job positions. Furthermore, refer from the table majority of the employees were experienced. Most of the respondents have been working in PAG below 2 years 10(9.43%), between 3 to 5 years 30(28.30%), 5 to 10 years which is 37 (34.91%), and above 10 years 29(27.36%).

The study revealed that respondents from each department category in the study are involved. The majority 21(19.81%) were from finance sections. 18(16.98%) were Packing and moving & Operation sections. 13(12.26%) of the respondents were Marketing & Transport section, 9(8.49%) of the respondents were Operation Administration, 4(3.77%) of the respondents were Training and development, the remaining 6(5.66%), and 4(3.77%) were IT and HR respectively.

4.3. Descriptive analysis

Descriptive analysis has been adopted for the study of the data. In doing so, tables, percentages, mean and standard deviation were used. Descriptive statistics is used to compare different factors in the study. This section presents the responses of employees on the provided survey questionnaires. The scale used in the statements was 1- strongly disagree, 2- disagree, 3-neutral, 4- agree, and 5- strongly agree.

4.3.1. Descriptive statistics for process of knowledge management

This section presents the responses of employees on the process of knowledge management in the organization. The knowledge management process has five units: knowledge creation,

Knowledge acquisition, knowledge storage, knowledge sharing, and knowledge application. The researcher tries to describe five sections one by one.

4.3.1.1. Descriptive statistics for knowledge creation

This section discussed the perception of the respondents about the practice of knowledge creation at PAG. The consistency of knowledge creation in the organization is evaluated concerning the below seven questions. The results of the analysis are presented in table 4.4 as depicted under.

Table 4.3 Descriptive statistics Knowledge creation

		Frequency and percentage					Total N & %	Mean	Standard deviation
1	**Knowledge creation**	**SD**	**D**	**NE**	**A**	**SA**			
kc1	PAG has qualified experts to generate and validate knowledge.	25 23.6%	9 8.5%	14 13.2%	42 39.6%	16 15.1%	106 100	3.14	1.424
kc2	The management team establishes and maintains effective knowledge-based business processes.	2 1.9%	36 34.0%	12 11.3%	42 39.6%	14 13.2%	106 100	3.28	1.128
kc3	Knowledge Management policy and strategy have been established and implemented in the organization.	31 29.2%	11 10.4%	19 17.9%	30 28.3%	15 14.2%	106 100	2.88	1.459
kc4	PAG has Training related practices to create knowledge.	5 4.7%	4 3.8%	0 0%	67 63.2%	30 28.3%	106 100	4.07	.929
kc5	The organization has best practices for training that have been put in place and address Knowledge Management related issues of training.	4 3.8%	4 3.8%	4 3.8%	67 63.2%	27 25.5%	106 100	4.03	.889
kc6	PAG excel knowledge-producing, utilizing if needed, transforming or sharing to other employees, and presenting knowledge as meaningful information to their work colleagues.	23 21.7%	10 9.4%	16 15.1%	46 43.4%	11 10.4%	106 100	3.11	1.347
kc7	Knowledge creation and application is encouraged, recognized and rewarded.	33 31.1%	5 4.7%	15 14.2%	31 29.2%	22 20.8%	106 100	3.04	1.561
	Total	123 16.58%	79 10.65%	80 10.78%	325 43.80%	135 18.19%			
N=106, aggregated mean =3.3639 S. D=1.00844									

Source own survey 2021

The finding shows these statements range from the Smallest mean of 2.88 (Knowledge Management policy and strategy have been established and implemented in the organization) to the Largest mean of 4.07(PAG has Training-related practices to create knowledge). From the above table, we can infer the respondent's response regarding knowledge creation practice in the organization. The aggregated mean 3.3639 (S. D=1.00844) is close to neutral, indicating that knowledge creation is not a common practice in the organization

4.3.1.2. Descriptive statistics for knowledge Acquisition

This section discussed the respondents' perception about the knowledge Acquisition practice of PAG. The consistency of knowledge acquisition in the organization evaluated concerning the below three questions. The results of the analysis are presented in table 4.5 as depicted under.

Table 4.4 Descriptive statistics of knowledge acquisition

		Frequency and percentage					**Total N & %**	**Mean**	**Standard deviation**
2	**Knowledge Acquisition**	SD	D	NE	A	SA			
ka1	PAG adopting new external knowledge (whether tacit or explicit) into the organization.	25 23.6%	2 1.9%	43 40.6%	32 30.2%	4 3.8%	106 100	2.89	1.190
ka2	PAG is highly effective at implementing external best practices compatible with PAG's system and combining with internal knowledge that leads to innovation.	23 21.7%	21 19.8%	28 26.4%	22 20.8%	12 11.3%	106 100	2.80	1.305
ka3	PAG mostly buys external knowledge to produce and provide the best service compared to their competitors.	22 20.8%	21 19.8%	32 30.2%	26 24.5%	5 4.7%	106 100	2.73	1.183
	Total	70 22.01%	44 13.84%	103 32.39%	80 25.16%	21 6.60%			
N=106, aggregated mean =2.8050 S. D=1.13982									

Source own survey 2021

The finding shows, these statements range from the Smallest mean of 2.73 (PAG mostly buys external knowledge to produce and provide the best service compared to their competitors) to the Largest mean of 2.89 (PAG adopting new external knowledge (whether tacit or explicit) into the organization). From the above table, we can infer the respondent's response regarding knowledge acquisition in the organization. The aggregated mean 2.8050(S. D=1.13982), the result is close to neutral, indicating PAG does not have a practice of adopting knowledge acquisition in the organization.

4.3.1.3. Descriptive statistics for knowledge Storage

This section discussed the respondents' perception about the knowledge storage practice of PAG. The consistency of knowledge stored in the organization evaluated concerning the below five questions. The results of the analysis are presented in table 4.6 as depicted under.

Table 4.5 Descriptive statistics of knowledge storage

		Frequency and percentage					**Total N & %**	**Mean**	**Standard deviation**
3	**Knowledge Storage**	**SD**	**D**	**NE**	**A**	**SA**			
ks1	PAG has a written knowledge retaining practice (knowledge capture, preserve, storage, retrieval, accessibility, and protection).	0 0%	31 29.2%	27 25.5%	39 36.8%	9 8.5%	106 100	3.25	0.974
ks2	Organizational knowledge has stored in electronic archives and databases, and it is accessible to all members of employees without having to contact the person who originally developed it.	20 18.9%	9 8.5%	29 27.4%	21 19.8%	27 25.5%	106 100	3.25	1.420
ks3	Employees have adequate knowledge/understanding of work processes.	27 25.5%	10 9.4%	5 4.7%	35 33%	29 27.4%	106 100	3.34	1.550
ks4	The organization has a clear, documented, high-level knowledge management plan and goals.	24 22.6%	17 16%	6 5.7%	31 29.2%	28 26.4%	106 100	3.21	1.547
ks5	In the practice of PAG, Knowledge Management manuals are adjustable, accurate, easily located & retrieve, accessible to all employees.	0 0%	37 34.9%	11 10.4%	41 38.7%	17 16%	106 100	3.36	1.123
	Total	71 13.15%	104 19.62%	78 14.72%	167 31.51%	110 21%			
N=106, aggregated mean =3.2660 S.D=1.20150									

Source own survey 2021

The finding shows, these statements range from the Smallest mean of 3.21 (The organization has a clear, documented, high-level knowledge management plan and goals) to the Largest mean of 3.36 (In the practice of PAG, Knowledge Management manuals are adjustable, accurate, easily located & retrieve, accessible to all employees). From the above table, we can infer the respondent's response regarding knowledge storage in the organization. The aggregated mean of the distribution of responses is 3.2660 (S. D=1.20150). The outcome is close to neutral, indicating PAG does not have a practice of knowledge storage in the organization.

4.3.1.4. Descriptive statistics for knowledge Sharing

This section discussed the respondents' perception of knowledge sharing practice of PAG. the consistency of knowledge sharing in the organization evaluated concerning the below ten questions. The results of the analysis are presented in table 4.7 as depicted under.

Table 4.6 Descriptive statistics of knowledge sharing

		Frequency and percentage					Total N & %	Mean	Standard deviation
4	**Knowledge Sharing**	**SD**	**D**	**NE**	**A**	**SA**			
ksh1	PAG has a written knowledge sharing practices.	2 1.9%	34 32.1%	18 17%	27 25.5%	25 23.6%	106 100	3.37	1.214
ksh2	Specialized knowledge is accessible for all employees in the organization.	31 29.2%	9 8.5%	22 20.8%	29 27.4%	15 14.2%	106 100	2.89	1.450
ksh3	PAG's management teams have knowledge-sharing experiences in all departments.	30 28.3%	17 16%	15 14.2%	22 20.8%	22 20.8%	106 100	2.90	1.530
ksh4	PAG has a motivational incentive system (promotion or rewarding) for employees and shares knowledge in the organization.	33 31.1%	10 9.4%	10 9.4%	32 30.2%	21 19.8%	106 100	2.89	1.557
ksh5	Most PAG's employees commit to sharing knowledge continuously.	33 31.1%	10 9.4%	10 9.4%	32 30.2%	21 19.8%	106 100	2.98	1.567
ksh6	There is a willingness of knowledgeable employees in PAG to share knowledge with their work colleagues.	34 32.1%	12 11.3%	3 2.8%	32 30.2%	25 23.6%	106 100	3.02	1.633
ksh7	Because of the workload in the organization, there is a shortage of time to share knowledge.	5 4.7%	28 26.4%	13 12.3%	20 18.9%	40 37.7%	106 100	3.58	1.351
ksh8	For most employees of PAG, there will be interaction to share their knowledge.	6 5.7%	40 37.7%	13 12.3%	40 37.7%	7 6.6%	106 100	3.02	1.121
ksh9	Skills are not effectively transferred to junior staff from more experienced employees in the organization.	18 17%	37 34.9%	10 9.4%	8 7.5%	33 31.1%	106 100	3.01	1.540
ksh10	PAG employee members combine their explicit knowledge by sharing reports, memos and other such documents.	0 0%	11 10.4%	15 14.2%	44 41.5%	36 34.0%	106 100	3.99	0.951
	Total	192 18.11%	208 19.61%	129 12.18%	286 26.98%	245 23.12%			
N=106, aggregated mean =3.1642 S.D= .72954									

Source own survey 2021

The finding shows, these statements range from the Smallest mean of 2.89 (Specialized knowledge is accessible for all employees in the organization and PAG has a motivational incentive system (promotion or rewarding) for employees and shares knowledge in the organization) to the Largest mean of 3.99 (PAG employee members combine their explicit knowledge by sharing reports, memos and other such documents).

From the above table, we can infer the respondent's response regarding knowledge sharing in the organization. The aggregated mean of the distribution of responses is 3.1642 (S.D= .72954). The result is close to neutral, indicating that employees do not have knowledge sharing practice in the organization.

4.3.1.5. Descriptive statistics for knowledge Application

This section discussed the respondents' perception about the knowledge application practice of PAG. The consistency of knowledge application is evaluated concerning the below seven questions. The results of the analysis are presented in table 4.8 as depicted under.

Table 4.7 Descriptive statistics of knowledge application

		Frequency and percentage					Total N & %	Mean	Standard deviation
5	**Knowledge Application**	**SD**	**D**	**NE**	**A**	**SA**			
kap1	PAG use internal organizational knowledge (tacit or explicit) to solve new problems, avoid errors and duplication of work.	32 30.2%	1 0.9%	10 9.4%	52 49.1%	11 10.4%	106 100	3.08	1.461
kap2	There is a lack of encouragement to apply the shared knowledge in the organization.	7 6.6%	41 38.7%	11 10.4%	11 10.4%	36 34.0%	106 100	3.26	1.436
kap3	There is frequent skilled employee turnover and retirement in the organization, so it is hard to monitor the stored knowledge.	3 2.8%	29 27.4%	15 14.2%	25 23.6%	34 32.1%	106 100	3.55	1.273
kap4	New hiring is doing long before experts depart to facilitate knowledge transfer.	6 5.7%	14 13.2%	28 26.4%	19 17.9%	39 36.8%	106 100	3.67	1.255
kap5	Knowledge creation and application (e.g. finding better methods, technology innovation) is encouraged, recognized and rewarded.	37 34.9%	0 0%	27 25.5%	28 26.4%	14 13.2%	106 100	2.83	1.477
kap6	Work assignments in the organization like job rotation promote knowledge learning opportunities.	7 6.6%	3 2.8%	10 9.4%	52 49.1%	34 32.1%	106 100	3.97	1.064
kap7	Implementation of the knowledge management strategy and plan is openly and actively supported by management.	28 26.4%	7 6.6%	21 19.8%	38 35.8%	12 11.3%	106 100	2.99	1.397
	Total	120 16.17%	95 12.8%	122 16.44%	225 30.32%	180 24.27%			
N=106, aggregated mean =3.3369 S.D= .45312									

Source own survey 2021

The finding shows these statements range from the Smallest mean of 2.83 (Knowledge creation and application (e.g., finding better methods, technology innovation) is encouraged, recognized and rewarded) to the Largest mean of 3.97 (Work assignments in the organization like job rotation promote knowledge learning opportunities).

From the above table, we can infer the respondent's response regarding knowledge application in the organization. The aggregated mean of the distribution of responses is 3.3369 (S.D= .45312). The outcome is close to neutral, indicating that the organization does not implement knowledge application practice.

4.3.2. Descriptive statistics for Factors of knowledge management

This section presents the responses of employees on the factors of knowledge management in the organization. Knowledge management has three parts that are organizational culture, organizational structure, and technology. This section analyses the effect of knowledge management factors on organizational performance.

4.3.2.1. Organizational Culture

This section discussed the perception of the respondents about the organizational culture of PAG. The consistency of organization culture is evaluated concerning the below six questions. The results of the analysis are presented in table 4.9 as depicted under.

Table 4.8 Descriptive statistics of organizational culture

		Frequency and percentage					Total N & %	Mean	Standard deviation
1	**Organizational Culture**	**SD**	**D**	**NE**	**A**	**SA**			
oc1	PAG has a supportive organizational culture to manage knowledge.	2 1.9%	31 29.2%	0 0%	53 50.0%	20 18.9%	106 100	3.55	1.156
oc2	PAG allows organizational members to participate in the development of department procedure manuals, rules, and objectives.	3 2.8%	6 5.7%	7 6.6%	72 67.9%	18 17.0%	106 100	3.91	0.845
oc3	PAG's employees have enough awareness of the importance of Knowledge Management that guides working individually in the organization.	1 0.9%	33 31.1%	17 16.0%	45 42.5%	10 9.4%	106 100	3.28	1.040
oc4	The management teams Support knowledge management practices in the organization.	4 3.8%	34 32.1%	7 6.6%	50 47.2%	11 10.4%	106 100	3.28	1.136
oc5	Employees and managers are open-minded and respect each Other's opinions and contributions towards the manuals.	40 37.7%	0 0%	8 7.5%	37 34.9%	21 19.8%	106 100	3.37	1.182
oc6	There is a team-oriented approach throughout the organization (employees trust, cooperate, andhelp each other).	25 23.6%	10 9.4%	8 7.5%	38 35.8%	25 23.6%	106 100	3.26	1.514
	Total	75 11.79%	114 17.92%	47 7.39%	295 46.38%	105 16.52%			
N=106, aggregated mean =3.4418 S.D= .94029									

Source own survey 2021

The finding shows, these statements range from the Smallest mean of 3.26(There is a team-oriented approach throughout the organization (employees trust, cooperate, and help each other) to the Largest mean of 3.91(PAG allows organizational members to participate in the development of department procedure manuals, rules, and objectives). From the above table, we can infer the respondent's response regarding organizational culture in the organization. The aggregated mean of the distribution of responses is 3.4418 S.D=.94029 the result is close to neutral, indicating the organization does not have a suitable organizational culture to manage knowledge.

4.3.2.2. Organizational Structure

This section discussed the respondent's perception about the organizational structure of PAG. The consistency of organization structure is evaluated concerning the below five questions. The results of the analysis are presented in table 4.10 as depicted under.

Table 4.9 Descriptive statistics of organizational structure

		Frequency and percentage					Total N & %	Mean	Standard deviation
2	**Organizational Structure**	**SD**	**D**	**NE**	**A**	**SA**			
os1	PAG has a proper Organizational Structure to Manage Knowledge.	6 5.7%	2 1.9%	8 7.5%	42 39.6%	48 45.3%	106 100	4.17	1.046
os2	There is a flow of information and knowledge in the organizational structures, that facilitates the exchange of experience for individuals and unlimited creativity.	3 2.8%	39 36.8%	14 13.2%	44 41.5%	6 5.7%	106 100	3.10	1.059
os3	Knowledge management roles and responsibilities are clearly defined and understood by managers and employees.	6 5.7%	2 1.9%	56 52.8%	35 33.0%	7 6.6%	106 100	3.35	0.832
os4	The knowledge management system is flexible and adaptive in PAG's organizational structure.	31 29.2%	8 7.5%	18 17.0%	38 35.8%	11 10.4%	106 100	2.91	1.424
os5	The management support for knowledge management system use (resources, training, and infrastructure)	0 0%	9 8.5%	11 10.4%	44 41.5%	42 39.6%	106 100	4.12	0.912
	Total	46 8.68%	60 11.32%	107 20.19%	203 38.30%	114 21.51%			
N=106, aggregated mean =3.5264 S.D= .74595									

Source own survey 2021

The finding shows, these statements range from the Smallest mean of 2.91(The knowledge management system is flexible and adaptive in PAG's organizational structure) to the Largest mean of 4.17(PAG has a proper Organizational Structure to Manage Knowledge). From the above table, we can infer the respondent's response regarding organizational structure in the organization. The aggregated mean of the distribution of responses is 3.5264 (S.D= .74595). The result is close to agreeing; indicating the employees decide on PAG has an appropriate organizational structure to manage Knowledge.

4.3.2.3. Technology

This section discussed the perception of the respondents about the ICT infrastructure of PAG. the consistency of technology is evaluated with concerning the below five questions. the results of the analysis are presented in table 4.11 as depicted under.

Table 4.10 Descriptive statistics of technology

		Frequency and percentage					Total N & %	Mean	Standard deviation
3	**Technology**	**SD**	**D**	**NE**	**A**	**SA**			
t1	PAG has the availability of proper technology and infrastructure to access the stored knowledge easily.	0 0%	15 14.2%	10 9.4%	36 34.0%	45 42.5%	106 100	4.05	1.045
t2	PAG's knowledge storage and knowledge sharing mechanism are doing by using newly adopted technologies.	30 28.3%	7 6.6%	25 23.6%	33 31.1%	11 10.4%	106 100	2.89	1.389
t3	PAG shared knowledge by video conferencing and other technologies when the employees work in a remote area.	37 34.9%	8 7.5%	16 15.1%	25 23.6%	20 18.9%	106 100	2.84	1.568
t4	PAG has effective information management practices that had implemented in the organization.	6 5.7%	2 1.9%	21 19.8%	68 64.2%	9 8.5%	106 100	3.68	0.879
t5	PAG uses technology for transfer, store and exchange of knowledge among individuals.	4 3.8%	35 33.0%	14 13.2%	29 27.4%	24 22.6%	106 100	3.32	1.254
	Total	77 14.53%	67 12.64%	86 16.23%	191 36.04%	109 20.56%			
N=106, aggregated mean =3.3547 S.D= .90513									

Source own survey 2021

The finding shows these statements range from the Smallest mean of 2.84 (PAG sharedknowledge by video conferencing and other technologies when the employees work in a remote area.) to the Largest mean of 4.05(PAG has the availability of proper technology and infrastructure to access the stored knowledge easily).

From the above table, we can infer the respondent's response regarding technology infrastructure in the organization. The aggregated mean of the distribution of responses is 3.3547 S.D= .90513, the result is close to neutral, indicating the organization does not have adequate ICT infrastructure in the organization that is capable of shifting information and knowledge within the organization and beyond.

4.4. Descriptive statistics for organizational performance

In this section, to attest to the respondents' perception about company performance, there are about 16 questions asked. The results of the analysis are presented in table 4.3 as depicted under.

Table 4.11 Descriptive statistics of organization performance

		Frequency and percentage					Total N & %	Mean	Standard deviation
	Statement	**SD**	**D**	**NU**	**A**	**SA**			
op1	The quality of services in the organization improved as compared to competitors.	33 31.1%	8 7.5%	12 11.3%	36 34%	17 16%	106 100	2.96	1.524
op2	The skills and knowledge of an employee enhance product and service quality and increase productivity.	0 0%	40 37.7%	5 4.7%	18 17.0%	43 40.6%	106 100	3.60	1.350
op3	The number of clients who are using our services has increased.	4 3.8%	40 37.7%	9 8.5%	31 29.2%	22 20.8%	106 100	3.25	1.265
op4	Customers are served with in KPI set by the organization.	4 3.8%	42 39.6%	4 3.8%	37 34.9%	19 17.9%	106 100	3.24	1.254
op5	The organization is operated to minimize the time taken to provide service and resolve customer complaints.	4 3.8%	38 35.8%	6 5.7%	29 27.4%	29 27.4%	106 100	3.39	1.321
op6	PAG provides on-time delivery of services to the clients.	27 25.5%	7 6.6%	9 8.5%	36 34%	27 25.5%	106 100	3.27	1.546
op7	Most services which have given by different departments of the organizations are well coordinated.	3 2.8%	27 25.5%	9 8.5%	34 32.1%	33 31.1%	106 100	3.63	1.245
op8	Team members in the organization work in synchronization with each other.	4 3.8%	20 18.9%	14 13.2%	48 45.3%	20 18.9%	106 100	3.57	1.113
op9	Application of KM systems in PAG reduces risk and error.	25 23.6%	0 0%	26 24.5%	49 46.2%	6 5.7%	106 100	3.10	1.279
op10	PAG management team can identify, evaluate and manage risk events.	33 31.1%	6 5.7%	17 16%	35 33%	15 14.2%	106 100	2.93	1.488
op11	The organization has internally developed risk management procedures or guidelines that are used to manage risks.	33 31.1%	5 4.7%	13 12.3%	36 34%	19 17.9%	106 100	3.03	1.540
op12	Knowledge management enabled the company to increase the value of its service.	2 1.9%	29 27.4%	5 4.7%	37 34.9%	33 31.1%	106 100	3.66	1.234
op13	The organization's service quality is good so this can increase a business's profits.	0 0%	32 30.2%	11 10.4%	39 36.8%	24 22.6%	106 100	3.52	1.148
op14	Customers are satisfied with the organization’s service quality.	0 0%	35 33%	6 5.7%	36 34%	29% 27.4%	106 100	3.56	1.212
op15	The organization has a good relationship with customers relative to other competitor company.	25 23.6%	7 6.6%	16 15.1%	34 32.1%	24 22.6%	106	3.24	1.484
op16	The organization has recognizable image and favorable reputation by its customers	24 22.6%	9 8.5%	9 8.5%	39 36.8%	25 23.6%	106	3.30	1.494
	Total	221 13.03%	345 20.34%	171 10.08%	574 33.84%	385 22.7%			
N=106, aggregated mean =3.3284 S. D=1.15811									

Source own survey 2021

The finding shows, these statements range from the Smallest mean of 2.93(PAG management team can identify, evaluate and manage risk events) to the Largest mean of 3.66(Knowledge management enabled the company to increase the value of its service). From the above table, we can infer the respondent's response regarding the performance of the organization. The aggregated mean 3.3284(SD=1.15811), which is close to neutral, indicating the level of performance in the organization is not adequate for employees, other stakeholders, clients and owners. The result shows that a lack of knowledge management practices affects the performance of the organization.

4.5. Relationship between knowledge management dimensions and organizational performance

One of the objectives of this research is to study the relationship of the organization's performance with the knowledge management process and knowledge management factors at PAG. To evaluate this relationship, Pearson correlation was computed with the result shown in the matrix below. As per Saunders et al., (2009), a correlation coefficient enables quantifying the strength of the linear relationship between variables. This coefficient is usually represented by 'r' and can take only the value from -1 to +1.

4.5.1. Pearson Correlation Analysis

This study implements Pearson correlation analysis, which investigates the strength of the relationships between the studied variables and provides evidence of convergent validity in the research paper. Pearson correlation coefficients reveal the magnitude and direction of the relationship (-1.0 + 1.0). The associations between two or more variables are measured by correlations. (Marczyk et al., 2005).

The associations between two or more variables are measured by correlations. Pearson correlation is +1 in the case of a perfect increasing (positive) linear relationship (correlation), -1 and 1 in all other cases indicating the degree of linear dependency between variables. To determine the relationship between the two knowledge dimensions of PAG using organizational performance, Pearson correlation was computed.

Table 4.12 The correlation analysis between knowledge management dimensions and organizational performance

Variable	1	2	3	4	5	6	7	8	9
1. Organizational performance	1								
2. knowledge creation	.943**	1							
3. Knowledge acquisition	.886**	.860**	1						
4. knowledge storage	.937**	.902**	.900**	1					
5. knowledge sharing	.869**	.870**	.836**	.888**	1				
6. Knowledge application	.221*	.315**	.198*	.253**	.313**	1			
7. Organizational culture	.928**	.903**	.844**	.894**	.858**	.265**	1		
8. Organizational structure	.577**	.690**	.490**	.593**	.698**	.653**	.603**	1	
9. Technology	.740**	.799**	.675**	.761**	.781**	.540**	.788**	.752**	1
**. Correlation is significant at the 0.01 level (2-tailed).									
*. Correlation is significant at the 0.05 level (2-tailed).									

Source own survey 2021

The independent variable could not influence the dependent variable when the p-value is greater than 0.05. If the p-value less than 0.05, the independent variables influence the dependent variable. The r-value measures the strength of the relationship between variables. The range of r value is between -1 and 1. when the r-value is zero. There is no relationship between variables. The meaning of -1 and 1 is negative correlation and perfect positive correlation. The following guideline is assumed by pallant (2010), i.e., the result of r value between 0.1 to 0.29, 0.3 to 0.49, and 0.50 to 1.0 is weak, moderately strong, and strong.

The above table presents the Pearson correlation results that are the association between all the independent variables with organizational performance.

From the above table, the correlation between knowledge creation and organizational performance (r-value is .943) implies that it is highly correlated, i.e., a positive and strong relationship between knowledge creation and organizational performance. Besides, if $p<0.05$ means knowledge creation influences organizational performance. The p-values are 0.000.

The correlation between knowledge Acquisition and organizational performance (r-value is .886) implies that it is highly correlated, i.e., a positive and strong relationship between knowledge acquisition and organizational performance. Besides, if $p<0.05$ means knowledge acquisition influences organizational performance. The p-values are 0.000.

The correlation between knowledge storage and organizational performance (r-value is .937) implies that it is highly correlated, i.e., a positive and strong relationship between knowledge storage and organizational performance. Besides, if $p<0.05$ means knowledge storage influences organizational performance. The p-values are 0.000.

The correlation between knowledge sharing and organizational performance (r-value is .869) implies that it is highly correlated. i.e., a positive and strong relationship between knowledge sharing and organizational performance. Besides, if $p<0.05$ means knowledge sharing influences organizational performance. The p-values are 0.000.

The correlation between knowledge application and organizational performance (r-value is .221) implies that it is weakly correlated. i.e., a positive and weak relationship between knowledge application and organizational performance. But, if $p<0.05$ means knowledge application significantly influences organizational performance. The p-values are 0.000.

The statistical results of the correlation between organizational culture and organizational performance shows ($r=.928$, $n=106$, $p=.000$). The strong correlation implies a strong positive relationship between organizational culture and organizational performance. Besides, if $p<0.05$ means organizational culture influences organizational performance.

The statistical results of the correlation between organizational structure and organizational performance shows ($r=.577$, $n=106$, $p=.000$). The strong correlation implies a good positive relationship between organizational structure and organizational performance. Besides, if $p<0.05$ means organizational structure influences the organizational performance.

The correlation between technology and organizational performance (r-value is .740) implies that it is highly correlated. i.e., a positive and strong relationship between technology and organizational performance. Besides, if $p<0.05$ means technology influences the organizational performance. The p-values are 0.000.

In general, knowledge creation has a stronger, positive, and significant correlation with organizational performance than the other knowledge management process. However, knowledge application was a relatively weak correlation to the performance of the company. Regarding the factors of knowledge management, organizational culture has a stronger, positive, and significant correlation with organizational performance than the other two knowledge management factors.

4.6. Regression Analysis

Regression is a technique that can be used to investigate the effect of one or more independent variables on a dependent variable. Regression analysis was conducted to understand by how much knowledge management process and knowledge management factors explains the dependent variable (organizational performance).

4.6.1. Multicollinearity test

Multicollinearity exists when; one independent variable is in a regression model is highly correlated with another independent variable, and one independent variable correlated with a linear combination of two or more independent variables (Kumar & Paul, 2004). Tests for multicollinearity are done by using variance inflation factor (VIF) and Tolerance. As a rule of thumb suggested by Liu (2010), if the VIF of a variable exceeds 10, there is a serious Multicollinearity problem. The VIF indicates whether a predictor has a strong linear relationship with the other predictor(s). Andy (2006) suggests that a tolerance value less than 0.1 almost certainly indicates a serious collinearity problem.

Table 4.13 results of multicollinearity

Model	Collinearity Statistics	
	Tolerance	**VIF**
Knowledge creation	.105	9.555
Knowledge acquisition	.153	6.535
Knowledge storage	.101	9.886
Knowledge sharing	.143	7.004
Knowledge application	.461	2.168
Organizational culture	.135	7.408
Organizational structure	.236	4.231
Technology	.220	4.544

Dependent Variable: Organizational Performance

Source own survey 2021

In this study, all of the predictors were found to have a tolerance of more than 0.1 and a VIF value of less than 10. Knowledge creation has (.105 tolerance and 9.555 VIF) value, Knowledge acquisition (.153 tolerance and 6.535 VIF), Knowledge storage (.101 tolerance and 9.886 VIF), Knowledge sharing (.143 tolerance and 7.004 VIF), Knowledge application (.461 tolerance and 2.168 VIF), Organizational culture (.135 tolerance and 7.408 VIF), Organizational structure (.236 tolerance and 4.231 VIF), Technology (.220 tolerance and 4.544 VIF), which indicates that multicollinearity is not an issue in this study and since the result of all variables meet the criteria, it can be concluded that the variables are correlated.

4.6.2. Multiple Regression Analysis

Multiple regression analyses were conducted to measure the impacts between the independent variables and the dependent variable. Multiple regression analysis was employed in this study to examine the relationship between knowledge management dimensions (knowledge creation, knowledge acquisition, knowledge storage, knowledge sharing, knowledge application, organization culture, organization structure & technology) and organizational performance. The effect of the independent variable on the dependent variable is showed by using regression analysis.

4.6.2.1. Model Summary

The multiple regression models consist of a table that provides the R, the R-square, the Adjusted R-square and the standard of error of the estimate, which can be used to determine how well a regression model fits the data. R Square is a key output of regression analysis.

Table 4.14 Model summary of Regression Analysis

Model	R	R Square(R^2)	Adjusted R Square(R^2)	Std. Error of the Estimate
1	.974[a]	.948	.944	.27521

Source own survey 2021

As presented in Table 4.13 above, the results of multiple regressions above show the coefficient of determination, i.e., adjusted R square computed to be 0.944=94.4%. That implies 94.4% of the variation of performance can be predicted by the independent variables process of KM (knowledge creation, acquisition, storage, sharing, application) and factors of KM (organization culture, structure & technology). That is a dimension of knowledge management at PAG that has a 94.4% influence on the organization's performance. Other variables can explain the remaining 5.6% of the variation on performance.

4.6.2.2. Anova table

The ANOVA table 4.14 Shows that accepting at least one of the dimensions of knowledge management of PAG (Technology, Knowledge application, Knowledge acquisition, organizational structure, organizational culture, Knowledge sharing, Knowledge creation, knowledge storage) had a significant relationship with organizational performance measures since the p-value in the ANOVA table is (0.000). It is less than the significance level of 0.05. It can be concluded that the dimensions of knowledge management strongly affect the organization's performance.

Table 4.15 Anova

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	133.482	8	16.685	220.296	.000[b]
Residual	7.347	97	.076		
Total	140.829	105			
a. Dependent Variable: organizational performance					
b. Predictors:(Constant), Technology, Knowledge application, Knowledge acquisition, Organizational structure, organizational culture, Knowledge sharing, Knowledge creation, Knowledge storage					

Source own survey 2021

4.6.2.3. Coefficients

The under depicted Table 4.15 Coefficients also indicates that knowledge creation, knowledge storage, organizational culture had significant relation to organizational performance of PAG at 95% confidence level, since their p-values are 0.000 which is less than the significance level 0.05. But knowledge acquisition, knowledge sharing, knowledge application, organizational structure, Technology had no significant influence to performance since their p-values>0.05 (p- values 0.801, 0.551, 0.974, 0.091 and 0.091).

These finding imply that knowledge creation, knowledge storage, knowledge sharing, organizational culture, knowledge acquisition are positively related to organizational performance while knowledge application, organizational structure, Technology are negatively related to organizational performance.

Table 4.16 Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	-.133	.240		-.554	.581	-.609	.343
knowledge creation	.553	.082	.481	6.716	.000	.389	.716
knowledge acquisition	.015	.060	.015	.253	.801	-.104	.135
knowledge storage	.306	.070	.318	4.357	.000	.167	.446
knowledge sharing	.058	.097	.037	.598	.551	-.135	.252
knowledge application	-.003	.087	-.001	-.033	.974	-.176	.170
organizational culture	.346	.078	.281	4.456	.000	.192	.501
organizational structure	-.126	.074	-.081	-1.707	.091	-.273	.021
Technology	-.108	.063	-.084	-1.707	.091	-.234	.018

a. Dependent Variable: organizational performance

b. predictors: (Constant), knowledge creation, knowledge acquisition, knowledge storage, knowledge sharing, knowledge application, organizational culture, organizational structure, Technology

Source own survey 2021

To further assess the effect of knowledge management on organizational performance, multiple linear regression analysis was conducted and indicated as follows.

The multivariate regression model is applied to determine how knowledge management affects the performance of the organization. The following model used eight predictor variables that are X1, X2, X3, X4, X5, X6, X7, and X8.

Y is organizational performance, X1 is knowledge creation, X2 is knowledge acquisition, X3 is knowledge storage, X4 is knowledge sharing, X5 is knowledge application, X6 is Organizational culture, X7 is Organizational structure, X8 is Technology.

From the significant and insignificant knowledge management dimensions to organizational performance can construct the model as follows.

Multivariate Regression Analysis Model is formulated as:

$y = b1x1 + b2x2 + \ldots + bnxn + c.$

b's are the coefficients of regression

OP=-0.133+0.553(KC)+0.015(KA)+0.306(KS)+0.058(KSH)-0.003(KAP)+0.346(OC)-0.126(OS)- 0.108(T)

4.6.3. Hypothesis testing

Standardized coefficients beta and p-value are one of the hypothesis testing mechanisms. The results of the hypotheses testing either it is accepted or rejected.

H1: knowledge creation, knowledge storage, and organizational culture have a significant positive effect on organizational performance.

The study clearly shows that knowledge creation, knowledge storage, and organizational culture affect organizational performance. The standardized coefficient beta (Beta=0.553, Beta= 0.306, Beta=0.346) implies that knowledge creation, knowledge storage, and organizational culture contribute more to the organization's performance. In other words, when knowledge creation, storage, and organizational culture were practiced, there will be a 55.3%, 30.6%, 34.6% increase in the performance of the organization. Furthermore, Knowledge creation, knowledge storage, and organizational culture have a p-value of 0.00, which indicates that they have a significant effect on the organization's performance because $p<0.05$. Therefore, the researcher accepts the hypothesis.

H2: knowledge acquisition and knowledge sharing have a significant positive effect on organizational performance.

As presented in Table 4.14 above, the results of multiple regressions shown knowledge acquisition and knowledge sharing affect the performance of the organization positively indicated by the standardized coefficient (Beta=.015, Beta=.058). Knowledge acquisition and knowledge sharing have p-value 0.801 and 0.551, which shows they have an insignificant effect on the organization's performance because $p>0.05$. However, Beta=.015 and Beta=.058 show that as one unit increases

in knowledge acquisition and knowledge sharing, there will be a 1.5% & 5.8% increase in organizational performance. Therefore, the researcher may accept the hypothesis. This indicates knowledge acquisition and knowledge sharing have a positive impact on the organizational performance of PAG.

H3: knowledge application, organizational structure, and technology have a negative effect on organizational performance.

As presented in Table 4.14 above, the results of multiple regressions shown knowledge application, organizational structure, and technology negatively affect the organization's performance, indicated by the standardized coefficient (Beta=-0.003, Beta=-0.126, Beta=-0.108). When knowledge application, organizational structure, and technology are practiced, there will be a 0.3%, 12.6%, 10.8% decrease in the organization's performance. Knowledge application, organizational structure, and technology have a p-value of 0.974, 0.091, and 0.091, which indicates that it has an insignificant effect on the organization's performance because $p>0.05$. Therefore, the researcher may reject the hypothesis.

Chapter Five

5. Summary of Findings, Conclusion & Recommendations

5.1. Introduction

The purpose of this study was to examine the effect of knowledge management on organizational performance in the case of Panafric Global Plc. the researcher has summarized the major findings, conclusions, and recommendations based on the information collected and analyzed.

5.2. Summary of Findings

One hundred sixteen questionnaires were distributed to the respondent, and 106(91.37%) data were collected, and it is valid for analysis. As per the analysis outcome, the respondents were 40(37.74%) females and 66(62.26%) males. Thus, the number of female respondents were less than male respondents, i.e., imbalance gender distribution. Of the total respondents, 91(85.85%) of them were under the age of 44 years and between 45-54 years, there were 15 respondents, so most respondents are young. The educational background of respondents shows 57(53.77%) are first degree holders, 22(20.76%) have a master's degree, 13(12.26%) have a diploma or certificate, and 14(13.21%) have other qualifications. Therefore, the respondents are well qualified. Furthermore, most of the respondents, that is to say, 85(80.18%), are in non-managerial job positions.

The organizational performance results in statistical analysis show, the aggregated mean was 3.3284. which is close to neutral, indicating the level of performance in the organization is not adequate for employees, other stakeholders, clients, and owners.

The result of statistical analysis, the subsection of the knowledge management process, i.e., knowledge creation the measured aggregated mean 3.3639, is close to neutral. So, the results indicate that knowledge creation was not a common practice in the organization.

The statistical analysis outcome of a study of knowledge acquisition reveals that the aggregated mean 2.8050, which is close to neutral, indicating PAG does not practice adopting knowledge acquisition in the organization.

From knowledge storage outcomes, the aggregated mean of responses was 3.2660. it is close to neutral. Therefore, PAG does not have a knowledge retaining mechanism for future use in the organization.

The aggregated mean of the distribution of responses of knowledge sharing was 3.1642. Thus, the result is close to neutral, indicating that employees do not have knowledge-sharing practices in the organization.

The aggregated mean of the distribution of responses of knowledge application was 3.3369. Thus, the outcome is close to neutral, indicating that the organization does not implement knowledge application practice.

The result of statistical analysis, factors of knowledge management, i.e., organizational culture, the aggregated mean of the distribution of responses was 3.4418. the result is close to neutral, showing PAG does not have a suitable organizational culture to manage knowledge.

Concerning organizational structure, the aggregated mean of the distribution of responses was 3.5264. Thus, the result is close to agreeing, indicating the employees decide on PAG has an appropriate organizational structure to manage Knowledge.

Regarding technology, the aggregated mean of the distribution of responses was 3.3547. The result is close to neutral, indicating that the organization does not have adequate ICT infrastructure.

The result obtained from Pearson correlation analysis showed the relationship between dependent and independent variables. Knowledge creation, knowledge acquisition, knowledge storage, knowledge sharing, organizational culture, organizational structure, and technology have highly correlated with organizational performance and influence organizational performance. Besides, knowledge applications have a weak correlation, and it significantly influences organizational performance.

Multicollinearity test result shows that the independent variables do have a linear relation with the dependent variable. In the previous chapter the computation shows there is no a serious multi-co linearity problem between the variables.

Furthermore, multiple regression analysis (model summary) shows that dimensions of knowledge management affect organizational performance using model summary conducted. From the regression result, the computed R square was to be 0.944 =94.4%.

From ANOVA regression analysis, the result has shown that the dimensions of knowledge management had a significant relationship with organizational performance. Since the p-value is (0.000), it is less than the significance level of 0.05.

As per the analysis result, coefficients also indicate that knowledge creation, knowledge storage, and organizational culture had a significant relation to performance at 95% confidence level since their p-values 0.000 less than the significance level of 0.05. But knowledge acquisition, knowledge application, organizational structure, technology, and knowledge sharing had no significant influence on performance since the p-value is greater than the significance level of 0.05.

Hypothesis-testing from results of multiple regressions revealed that knowledge creation, knowledge storage, and organizational culture have a positive relationship with organizational performance using performance measures with (Beta=0.553, Beta= 0.306, Beta=0.346), at confidence level ($p<0.05$). Knowledge acquisition and knowledge sharing have a significant positive effect on organizational performance with (Beta=.015, Beta=.058), at confidence level ($p>0.05$). Knowledge application, organizational structure, and technology have a negative effect on organizational performance with (Beta=-0.003, Beta=-0.126, Beta=-0.108), at confidence level ($p>0.05$). The beta coefficient for knowledge application, organizational structure, and Technology are negative, which means organizational performance and the three independent variables have an inverse relationship, i.e., knowledge application, organizational structure, Technology, as increases organizational performance decreases. This is because, in our country context, the study result indicates that implementation and utilization of KM technology, the organizational structure that has knowledge management databases and knowledge application in the organization are still low.

5.3. Conclusions

Based on the research findings, the conclusion answers the stated research question. The study wanted to identify the existing knowledge management practice at PAG. Based on the above research findings, knowledge management processes, i.e., knowledge creation, knowledge acquisition, knowledge storage, knowledge sharing, and knowledge application, were practiced at a neutral level. So, PAG does not have a common practice of KM.it has a poor knowledge management practice. Therefore, the researcher concludes that KM practices not applied at PAG.

The researcher wanted to investigate the barriers to knowledge sharing in the organization. As shown in the study's finding, the knowledge-sharing practices were not practical in the organization. Knowledge sharing barriers were: Workload, Lack of written manuals, Shortage of time, Lack of encouragement in the organization, skilled employee turnover. So, the researcher concludes that the KM sharing practice did not apply at PAG.

The researcher analyzes the benefits of KM and sharing practice to organizational performance. As per the findings of the study, knowledge-sharing practice is not applicable in the organization. Therefore, KM sharing practices influence the performance of the organization.

The researcher wants to inspect the Effect of Knowledge Management on Organizational Performance. As shown in the study's findings, the relationship between the knowledge management dimensions using organizational performance presents a correlation analysis matrix. All sections of the KM process except knowledge application had a strong relationship and influenced the organizational performance. Furthermore, all KM factors had a strong relationship and affected the organization's performance. Therefore, the researcher concludes that knowledge application has a weak correlation with organizational performance.

From model summary analysis, the effects of KM dimensions constitute 94.4% of organizational performance. Therefore, the researcher concludes that KM has a strong significant impact on the performance of the organization.

5.4. Recommendation

The following recommendations are made based on the summary of findings and conclusion:

The organization should review the existing knowledge management practice once in a while. The organization should work to maintain the KM practice because the result is found weak. The practice of KM should work to improve it.

Organizational culture should be revised to facilitate the impact of the performance of the organization. The organization needs to create a positive organizational culture to enable individuals and groups to share openly and manage knowledge. Besides, PAG must provide newly adopted technology infrastructure to retrieve knowledge, store knowledge, and transfer knowledge among employees. Besides, the organization should implement technologies that are user-friendly to the employees.

Most employees of the organization have work overload, so the PAG should implement a knowledge management strategy to create, store, share and access knowledge at any time. Besides this, the organization's management has to give appropriate support and encouragement to the knowledge-sharing activities. besides internal and external trainings and development program have to schedule to employees. Furthermore, the organization should work on the human capital that retains a skilled workforce by providing benefits and preserving employee knowledge before leaving the organization.

To improve the weak relationship between knowledge application and Knowledge management, the management support by implementing strategy and plan actively. By providing benefits and rewards, the organization could reduce skilled employee turnover.

The study reviews the effect of knowledge management on organizational performance as perceived by its employees. The overall performance level of the company is at a neutral level. There was inadequate knowledge management at PAG. Therefore, the company should have to work more on strengthening the knowledge management practice and ensuring its performance.

References

Abdel, N., Gawaher, H. and Mohamed, M. (2012). The Role of Knowledge Management in Enhancing Organizational Performance. I.J. *Information Engineering and Electronic Business Journal* 5, 27-35.

Ahmed, F., Mohamed, O., and Ibrahim, I. (2013). Knowledge Acquisition among Engineering in MNCs. *Independent Journal of Management and Production* 4(1).

Akhgar, B and Yates (2011); Holistic Architecture for KM deployment, 3rd Int Conf on KM. KNS.

Alavi, M., & Leidner, D. E. (2001). Review: Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS Quarterly: Management Information Systems, 25*(1),107.

Ann, O. Ezeobi, J. and Ituma, F. (2013). Impact of Intellectual Capital on Organizational Performance: *Evidence from Nigeria Banking sector*. JORINS II (2) December, 2013.

Andy Field (2006). Discovering Statistics Using SPSS.

Arsenijević, (2009) Correlation of Experimenting Culture and Process of Knowledge Management in The University Environment, *African Journal of Business Management*, Vol. 3(10), pp 521-532.

Aurum A, Daneshgar F, Ward J (2008). Investigating knowledge management practices insoftware development organizations. An Australian experience. *Information and Software Technology*, 50(6), 511–533.

Azudin, N., Ismail, M. N., & Taherali, Z. (2009). Knowledge sharing among workers: A study on their contribution through informal communication in Cyberjaya, Malaysia. Knowledge Management and E-Learning, 1(2).

Bureš, V. (2003), Cultural barriers in knowledge sharing. *Economics and Management*; 6: 57-62.

Burrows, G. Drummond, D.L and Martinsons, M.G. (2005). Knowledge Management in China. *Communications of the ACM,* 48 (4), PP.73-76.

Butler T, Heavin C, O'Donovan F. (2007). A theoretical model and framework for understanding knowledge management system implementation. *Journal of organizational and End User Computing*, 19(4),1-21.

Chen, C. J., & Huang, J. W. (2007). How organizational climate and structure affect knowledge management-The social interaction perspective. *International Journal of Information Management, 27(2).*

Chen, Z. and X. Xu (2009). Study on construction of knowledge management system based on enhancing core competence of industrial clusters. *International journal of business and management*, 5(3): 217-222.

Chi Lai, M., Wang, W., & Huang, H. (2011). Linking the benchmarking tool to a knowledge based system for performance improvement. Expert Systems with Applications, 38(8).

Chyi Lee, C., & Yang, J. (2000). Knowledge value chain. *Journal of Management Development*, 19(9).

Cochran, W.G. (1977). *Sampling Techniques*. 3rd Edition.

Cormican and O'Sullivan (2003). A collaborative knowledge management tool for product innovation management. *International Journal of Technology Management* 26(1): 53-67.

Davenport, T.H. and Prusak, L. (2000), Working knowledge: How Organizations Manage What They Know. Boston, Massachusetts: Harvard Business School Press.

Drucker, P. (2003): My view on management, Novi Sad, Adižes.

Emadzade, M.K., Mashayekhi, B., & Abdar, E. (2012). Knowledge management capabilities and organizational performance. *Interdisciplinary Journal of Contemporary Research in Business*, 3(11), 781-790.

Fattahiyan, S., Hoveida, R., Siadat, S. A. & Talebi, H. (2013). The Relationship between Knowledge Management Enablers, Processes, Resources and Organizational Performance in Universities. *International Journal of Education and Research*, 1(1).

Frappaolo, C. (2006). Knowledge management. West Sussex: Capstone Publishing Ltd.

Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge Management: An Organizational Capabilities Perspective. Journal of Management Information Systems, 18(1), 185-214.

Greiner, M.E., Bo hmann, T., and Krcmar, H. (2007). A strategy for knowledge management. *Journal of Knowledge Management*, 11(6) 3-15.

Hislop, D. (2013). Knowledge management in organisations: A critical introduction. 3rd Ed. UK: Oxford University Press.

Ho, C. (2009). The relationship between knowledge management enablers and performance. *Industrial Management & Data Systems*, 109(1), 98–117.

Ian Watson (2003), Applying Knowledge Management Techniques for Building Corporate Memories, Morgan Kaufmann Publishers

Janepuengporn, K., & Ussahawanitchakit, P. (2011). The impacts of knowledge management strategy on organizational performance: An empirical study of clothing manufacturing businesses in Thailand. *International Journal of Business Strategy*.

Jayasingam, S., Ansari, M. A., Ramayah, T., & Jantan, M. (2013). Knowledge management practices and performance: *Knowledge Management Research and Practice*, 11(3).

Keng Boon, O., Arumugam, V., Samaun Safa, M., & Abu Bakar, N. (2007). HRM and TQM: association with job involvement. Personnel Review, 36(6), 939–962.

Kidwell, J., Vander Linde, K., Johnson, S (2001). Applying corporate knowledge management practices in higher education Educause quarterly, 4 (2000), 28-33.

Kimiz Dalkir(2005) ,Knowledge management in theory and practice, Elsevier Inc.

Kovačič, A, V.V. Bosilj, and A. Lončar (2006). A process-based approach to knowledge management. Economic Research; 19(2): 53-66.

Kreitner, R. and Kinicki, A. (2010). Organizational Behaviour. New York: McGraw-Hill/Irwin.

Kumar, A., Antony, J. and Dhakar, T.S. (2006). Integrating quality function deployment and benchmarking to achieve greater profitability, Benchmarking: *An International Journal*, 13(3), 290-310.

Lahti, RK & Beyerlein, MM (2000), Knowledge Transfer and Management Consulting: A Look at "The Firm", Business Horizons, pp. 65-73.

Li, Y., Tarafdar, M., & Rao, S. S. (2012). Collaborative knowledge management practices: Theoretical development and empirical analysis. *International Journal of Operations and Production Management*, 32(4).

Lim, D., & Klobas, J. (2000). Knowledge management in small enterprises. Electronic Library, 18(6).

Liu, Y. (2010). Social Media Tools as a Learning Resource. *Journal of Educational Technology Development and Exchange*, 3, 101-114.

Marczyk, G., DeMatteo, D., & Festinger, D. (2005). Essentials of research design and methodology essentials of behavioral science. Book.

Market Business News (2020, May 2). Organizational Performance-definition and meaning. https://marketbusinessnews.com/financial-glossary/organizational-performance-definition-meaning.

Martin, F. (2012). Knowledge Acquisition Strategies and Company Performance in Young High Technology Companies. *British Journal of Management*, Vol 23, 325-343.

Mavodza, J and Ngulube, P. (2011). Exploring the use of knowledge management practices in an academic library in a changing information environment: *South African Journal of Library and Information Science*, 77(1): 15-25.

Mcdermott, R., & O'Dell, C. (2001). Overcoming cultural barriers to sharing knowledge. *Journal of Knowledge Management*, 5(1).

Milliken, F.J., C.A. Bartel, and T.R. Kurtzberg (2003). Diversity and creativity in work groups. Group creativity: *Innovation through collaboration*. New York, N.Y., Oxford University Press.

Mills, A. M., & Smith, T. A. (2011). Knowledge management and organizational performance: A decomposed view. *Journal of Knowledge Management*, 15(1).

Mohammed, W., & Jalal, A. (2011). The Influence of Knowledge Management System (KMS) on Enhancing Decision Making Process (DMP). *International Journal of Business and Management*, 6(8).

Monavvarian, A., Asgari, N., Akhavan, P., & Ashena, M. (2007). Developing social capital for facilitating knowledge management practices. *International Journal of Social Economics*, 40(9).

Monavvarian, A., Asgari, N., Akhavan, P., & Ashena, M. (2013). Developing social capital for facilitating knowledge management practices. *International Journal of Social Economics*, 40(9).

Nasser H. Zaied, A., Soliman Hussein, G., & M. Hassan, M. (2012). The Role of Knowledge Management in Enhancing Organizational Performance. International Journal of Information Engineering and Electronic Business, 4(5).

Nevo, D., Benbasat, I., & Wand, Y. (2012). The knowledge demands of expertise seekers in two different contexts: Knowledge allocation versus knowledge retrieval. Decision Support Systems, 53(3), 482–489.

Ngulube, P. (2002). Managing and preserving indigenous knowledge in the knowledge management era: challenges and opportunities for information professionals. Information Development, 18(2): 95-102.

Pallant, J. (2010). SPSS Survival Manual Survival Manual Pallant. McGraw-Hill Education.

Paz Salmador, M. and Bueno E. (2007). Knowledge creation in strategy- making: Implications for theory and practice. European Journal of Innovation Management, 10(3): 367-390.

Petrides, L, Nodine, T. (2003). Knowledge management in education: defining the landscape, paper presented at the 1st Knowledge Management in Education Summit.

Polanyi, M. (1958). Personal knowledge, towards a post critical philosophy: (Reprinted in 2002), Routledge, London, Taylor and Francis Group.

R. Kumar, Paul, (2004), Multicollinearity: causes, effects and remedies.

Ranjbarfard, M., Aghdasi, M., López-Sáez, P., & López, J. E. N. (2014). The barriers of knowledge generation, storage, distribution and application that impede learning in gas and petroleum companies. Journal of Knowledge Management, 18(3).

Ronald Maier (2007), Knowledge Management Systems: Information and Communication Technologies for Knowledge Management , Springer-Verlag Berlin Heidelberg ,Third edition

Saunders, M., Lewis, P., & Thornhill, a. (2009). Research Methods for Business Students. Business (Vol. 5th).

Senge, P. M. (2006). The Fifth Discipline: The Art & Practice of the Learning Organization.

Serban, A. M., & Luan, J. (2002). Overview of Knowledge Management. New Directions for Institutional Research, 2002(113), 5–16.

Serrat, O. (2017). Glossary of Knowledge Management. Knowledge Solutions, 1055–1061.

Shannak, R. (2010). Knowledge-based Systems Support for Strategic Decisions. *European Journal of Economics, Finance and Administrative Sciences*, Vol. 21, pp. 7- 20.

Sher, P. J., & Lee, V. C. (2004). Information technology as a facilitator for enhancing dynamic capabilities through knowledge management. *Information and Management*, *41*(8).

Smith, T. A., Mills, A. M., & Dion, P. (2010). Linking business strategy and knowledge management capabilities for organizational effectiveness. *International Journal of Knowledge Management*, *6*(3).

Subramaniam K., Kounios J., Parrish T. B., Jung-Beeman M. (2009). A brain mechanism for facilitation of insight by positive affect. *Journal of Cognitive Neuroscience*, 21(3), 415–432.

Wenger, E., McDermott, R., & Snyder, W. M. (2002). Cultivating Communities of Practice (1st ed.). *Harvard Business Review Press*.

William, N., John, V. and Peter, D. (2012). How Organizational know what they know: A Survey of Knowledge Identification Methods among Australian Organization.

Yousuf Al-Aama, A. (2014). Technology knowledge management (TKM) taxonomy. VINE, 44(1), 2–21.

Xiong S. and Deng H. (2008). Critical Success Factors for Effective Knowledge Sharing in Chinese Joint Ventures. 19th Australasian Conference on Information Systems, PP-1089-1098,

Zack, M., McKeen, J., & Singh, S. (2009). Knowledge management and organizational performance: An exploratory analysis. *Journal of Knowledge Management*, *13*(6).

Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2012). Business Research Methods (with Qualtrics Printed Access Card) (9th ed.). Cengage Learning.

Zwain, A., Teong, L. and Othman, S. (2012). Knowledge management Processes and Academic performance in Iraq: An Empirical Investigation. *International Journal of Academic Research in Business and Social Sciences*, 2 (6).

ANNEX I. QUESTIONAIRE

A structured questionnaire proposed to gather primary data on the effect of knowledge management on organizational performance: the case of Panafric global plc.

Part I: Demographic profile of the respondent

Please tick (×) the below-given boxes for your appropriate answer.

a) Please indicate your gender?

☐ Male ☐ Female

b) Your age groups?

☐ 18- 25 years ☐ 26-34 years

☐ 35-44 years ☐ 45-54 years ☐ More than 55 years

c) Please indicate your highest educational level?

☐ Certificate/ Diploma ☐ BA/BSC Degree ☐ MA/MSC Degree

☐ PHD ☐ Others

d) What is your current designation /position in the organization?

☐ Junior level ☐ Middle level ☐ Senior level ☐ Manager/Director

e) How many years you have been working in the organization?

☐ Below 2 years ☐ From 3- 5 Years ☐ From 5-10 years ☐ above 10 years

f) Which department do you work under?

☐ Marketing ☐ operation Administration ☐ Operation ☐ Finance ☐ HR

☐ Packing and moving ☐ Training and development ☐ Transport section ☐ IT

Part II: Process of knowledge management in case of PAG.

1	Knowledge creation	Strongly Disagree	Disagre e	Neutral/ not sure	agree	Strong ly Agree
kc1	PAG has qualified experts to generate and validate knowledge.					
Kc2	The management team establishes and maintains effective knowledge-based business processes.					
Kc3	Knowledge Management policy and strategy have been established and implemented in the organization.					
Kc4	PAG has Training related practices to create knowledge.					
Kc5	The organization has best practices for training that have been put in place and address Knowledge Management related issues of training.					
Kc6	PAG excel knowledge-producing, utilizing if needed, transforming or sharing to other employees, and presenting knowledge as meaningful information to their work colleagues.					
Kc7	Knowledge creation and application is encouraged, recognized and rewarded.					

2	Knowledge Acquisition	Strongly Disagree	Disagree	Neutral / not sure	agree	Strongl y Agree
Ka1	PAG adopting new external knowledge (whether tacit or explicit) into the organization.					
Ka2	PAG is highly effective at implementing external best practices compatible with PAG's system and combining with internal knowledge that leads to innovation.					
Ka3	PAG mostly buys external knowledge to produce and provide the best service compared to their competitors.					

3	Knowledge Storage	Strongly Disagree	Disagree	Neutral / not sure	agree	Strongly Agree
ks1	PAG has a written knowledge retaining practice (knowledge capture, preserve, storage, retrieval, accessibility, and protection).					
ks2	Organizational knowledge has stored in electronic archives and databases, and it is accessible to all members of employees without having to contact the person who originally developed it.					
ks3	Employees have adequate knowledge/understanding of work processes.					
ks4	The organization has a clear, documented, high-level knowledge management plan and goals.					
ks5	In the practice of PAG, Knowledge Management manuals are adjustable, accurate, easily located & retrieve, accessible to all employees.					

4	Knowledge Sharing	Strongly Disagree	Disagree	Neutral/ not sure	agree	Strongly Agree
ksh1	PAG has a written knowledge sharing practices.					
ksh2	Specialized knowledge is accessible for all employees in the organization.					
ksh3	PAG's management teams have knowledge-sharing experiences in all departments.					
Ksh4	PAG has a motivational incentive system (promotion or rewarding) for employees and shares knowledge in theorganization.					
Ksh5	Most PAG's employees commit to sharing knowledge continuously.					
Ksh6	There is a willingness of knowledgeable employees in PAG to share knowledge with their work colleagues.					
Ksh7	Because of the workload in the organization, there is a shortage of time to share knowledge.					
Ksh8	For most employees of PAG, there will be interaction to share their knowledge.					
Ksh9	Skills are not effectively transferred to junior staff from more experienced employees in the organization.					
ksh10	PAG employee members combine their explicit knowledge by sharing reports, memos and other such documents.					

5	Knowledge Application	Strongly Disagree	Disagree	Neutral/ not sure	agree	Strongly Agree
kap1	PAG use internal organizational knowledge (tacit or explicit) to solve new problems, avoid errors and duplication of work.					
kap2	There is a lack of encouragement to apply the shared knowledge in the organization.					
kap3	There is frequent skilled employee turnover and retirement in the organization, so it is hard to monitor the stored knowledge.					
kap4	New hiring is doing long before experts depart to facilitate knowledge transfer.					
kap5	Knowledge creation and application (e.g. finding better methods, technology innovation) is encouraged, recognized and rewarded.					
kap6	Work assignments in the organization like job rotation promote knowledge learning opportunities.					
kap7	Implementation of the knowledge management strategy and plan is openly and actively supported by management.					

Part III: Factors of knowledge management

1	Organizational Culture	Strongly Disagree	Disagree	Neutral / not sure	agree	Strongly agree
oc1	PAG has a supportive organizational culture to manage knowledge.					
oc2	PAG allows organizational members to participate in the development of department procedure manuals, rules, and objectives.					
oc3	PAG's employees have enough awareness of the importance of Knowledge Management that guides working individually in the organization.					
oc4	The management teams Support knowledge management practices in the organization.					
oc5	Employees and managers are open-minded and respect each Other'sopinions and contributions towards the manuals.					
oc6	There is a team-oriented approach throughout the organization (employees trust, cooperate, and help each other).					

2	Organizational Structure	Strongly Disagree	Disagree	Neutral /not sure	agree	Strongly agree
os1	PAG has a proper Organizational Structure to Manage Knowledge.					
os2	There is a flow of information and knowledge in the organizational structures, that facilitates the exchange of experience for individuals and unlimited creativity.					
os3	Knowledge management roles and responsibilities are clearly defined and understood by managers and employees.					
os4	The knowledge management system is flexible and adaptive in PAG's organizational structure.					
os5	The management support for knowledge management system use (resources, training, and infrastructure)					

3	Technology	Strongly Disagree	Disagree	Neutral/not sure	agree	Strongly agree
t1	PAG has the availability of proper technology and infrastructure to access the stored knowledge easily.					
t2	PAG's knowledge storage and knowledge sharing mechanism are doing by using newly adopted technologies.					
t3	PAG shared knowledge by video conferencing and other technologies when the employees work in a remote area.					
t4	PAG has effective information management practices that had implemented in the organization.					
t5	PAG uses technology for transfer, store and exchange of knowledge among individuals.					

Part IV: Evaluate the effects of knowledge management on organization performance Please tick (×) the below-given boxes for your appropriate answer.

	Organization performance	Strongly Disagree	Disagree	Neutral /not sure	agree	Strongly agree
op1	The quality of services in the organization improved as compared to competitors.					
op2	The skills and knowledge of an employee enhance product and service quality and increase productivity.					
op3	The number of clients who are using our services have increased.					
op4	Customers are served with in KPI set by the organization.					
op5	The organization is operated to minimize the time taken to provide service and resolve customer complaints.					
op6	PAG provides on-time delivery of services to the clients.					
op7	Most services which have given by different departments of the organizations are well coordinated.					
op8	Team members in the organization work in synchronization with each other.					
op9	Application of KM systems in PAG reduces risk and error.					
op10	PAG management team can identify, evaluate and manage risk events.					
op11	The organization has internally developed risk management procedures or guidelines that are used to manage risks.					
op12	Knowledge management enabled the company to increase the value of its service.					
op13	The organization's service quality is good so this can increase a business's profits.					
op14	Customers are satisfied with the organization’s service quality.					
op15	The organization has a good relationship with customers relative to other competitor company.					
op16	The organization has recognizable image and favorable reputation by its customers					