

**INFLUENCE OF AMBIDEXTERITY APPROACHES ON PROJECT SUCCESS
WITHIN THE AVIATION INDUSTRY IN KENYA. A CASE STUDY OF WAJIR
INTERNATIONAL AIRPORT REHABILITATION PROJECTS**

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DECLARATION

I declare that this applied research proposal is my original work and that it has not been presented in any other University for academic credit

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Supervisor's Declaration

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DEDICATION

I dedicate this research project to my family and many friends. I would like to present my sincere thankfulness to my dear father and my deceased mother, for their great role in my life and their numerous sacrifices for me and my siblings. A special feeling of gratitude to my sister in-law Jane Komen, who, although no longer with us, continues to inspire by example in prayerfulness and her dedication for accomplishment. God bless you all.

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ABSTRACT

Aviation sector in 21st century is faced with the need to exploit internal resources and explore new strategies to modernize and meet the dynamic changes in the global aviation industry. This study was on the influence of ambidexterity on project success within the aviation industry in Kenya. Specifically, the study examined the influence of sequential, structural and contextual ambidexterity on project success within the aviation industry in Kenya using Wajir International Airport rehabilitation project as a proxy for aviation industry in Kenya. Moreover, the study was underpinned on the dynamic capabilities theory and supplemented by the resource-based theory and organizational theory. Descriptive cross-sectional study design was adopted for the study. Questionnaire was used to collect primary data on drop and pick method with a target population of 214 respondents. A pilot study was conducted to test the reliability of the questionnaires using Cronbach's alpha. The study used stratified probability sampling in the selecting 67 employees working in Wajir airport. Data was analyzed using descriptive statistics; mean standard deviation, frequencies, and percentages. In addition to inferential statistics involved Pearson correlation and regression analysis. Analyzed data was presented in charts, figures and tables and interpretation of the same provided. The study findings were that sequential ambidexterity (high knowledge transfers, individual factors, switching firm's capabilities, project strategies, firm's unique capacities, absorptive capacities and technological resources) had very strong positive significant influence project success in the aviation sector. In addition, the results revealed that structural ambidexterity (organization structural separation, structural differentiation, structural integration, structural alignment, setting up new department and separating project team) had very strong positive significant influence on aviation industry projects' success. Finally, the study findings depicted that contextual ambidexterity (creation of shared vision, process designing, job enrichment, top management supports, designing cultural values, employee's discipline and employee's trust) had a stronger positive significance showing it influenced aviation industry success. The study recommend management should create an environment with high knowledge transfers so as to encourage exploring or exploiting firm's resources, organization structure should use various business units in exploring and exploiting resources and finally organizations should encourage creation of shared vision, flow of information and enhance job enrichment in order to attain project success.

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DEFINITION OF TERMS

Ambidexterity – involves the ability and capability of using both hands simultaneously to perform a specific activity.

Exploitation – used to describe the firm employing project management practices, capabilities and resources to attain project success or performance.

Exploration - refers to evaluating new mega projects opportunities and coming up with techniques and manners of meeting stakeholders' interests.

Project success – refers to achieving the project goals and the planned results while observing predetermined conditions such as time, quality, cost and stakeholder's perceptions and performance.

Sequential ambidexterity - refers to the ability of a firm to focus on one of the project objectives and competing it before embarking on another objective.

Structural ambidexterity - also called simultaneous ambidexterity indicates that a firm assigns project tasks to different organization department which balance to the way they explore or exploit.

Contextual ambidexterity - indicates a scenario where every project member switch between to compete project tasks that is exploiting and/or exploring whenever the project tasks arise.

ABBREVIATIONS AND ACRONYMS

AAI	Airports Authority of India
EU	European Union
IATA	“International Air Transport Association”
ICAO	“International Civil Aviation Organization”
JKIA	“Jomo Kenyatta International Airport”
KCAA	“Kenya Civil Aviation Authority”
RPKS	Revenue Persons Kilometers
USA	United States of America
WJR	IATA code for Wajir International Airport
HKWJ	ICAO code for Wajir International Airport
MTP	Vision 2030, Second Medium Term Plan 2013-2017
NOTAM	Notice to Airmen.
KCARs	Kenya Civil Aviation Regulations.

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CHAPTER ONE: INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 Introduction

This research sought to examine influence of ambidexterity on project's success within the aviation industry in Kenya. The chapter presented study background, research problem, study purpose, objectives, questions, study scope, significance and study delimitations.

1.2 Background of Study

Ambidexterity involves the ability and capability of using both hands simultaneously to perform a specific activity. In addition it can mean the manner in which an individual can explore or exploit same time to a achieve an objectives. The study engaged in investigation of ambidexterity with the organization aspects and interrelated to project success. Chen (2017) noted that Duncan in 1976 was the pioneer of introducing the terminology organizational ambidexterity that later was invented and keenly analyzed more in 1990s. Ambidexterity indicates the organization's abilities of aligning efficiently its management of business demands by adapting to changing environment at the same time or simultaneously. Organizational ambidexterity indicate capability of a business to balance or use simultaneously exploration and exploitation in order it can adjust to environmental changes while utilizing existing business methods.

1.2.1 Dependent Variable

The dependent variable of the study was project success which refer to reaching the objectives and the planned results in compliance with predetermined conditions of time, cost and performance. Davis (2014) used in her paper a set of nine themes in order to describe success factors of projects: cooperation and communication, timing, agreeing

objectives, stakeholder satisfaction, acceptance and use of final products, cost/ budget aspects, competencies of the project manager, strategic benefits of the project and top management support.

1.2.2 Independent Variables

The dependent variables were the ambidexterity approaches which included the sequential, structural, and contextual ambidexterity.

1.2.2.1 Sequential Ambidexterity

The first independent variable is sequential ambidexterity means to maintain the balance or to mitigate the conflicts between exploration and exploitation. Sequential ambidexterity indicates that a firm will focus on one of the objectives that is competing after another (Du & Chen, 2018). Alignments required for innovation and efficiency companies are required to shift their structures over time to align the structure with the corporate's strategy; that is, organizations attain ambidexterity in a sequential fashion by shifting structures over time.

1.2.2.2 Structural Ambidexterity

The second independent variable is structural or simultaneous ambidexterity implies that an organization allocates different tasks to different sub-units of the organization. Also, structural ambidexterity may be called simultaneous ambidexterity indicates that a firm assigns tasks that are different to sub-units which are different in the firm as balancing way to explore or exploit trade-off through utilizing organizationally distinct strategic integrated business sub units which have various systems (Heracleous et al., 2017).

1.2.2.3 Contextual Ambidexterity

The final independent variable that the study focused on was contextual type of ambidexterity is defined as a situation where each member of the organization can switch between the competing tasks of exploitation and exploration as the demand or opportunity arises. This form of ambidexterity behavioral capacities deals simultaneously in attaining adaptability and alignment at business level units in that aligning is consistency with all the patterns or trends of business activities in the exploitation by business units (Zaidi & Othman, 2015).

Exploration of new strategies is important to organizations. Choi and Lee (2015) alluded that exploration refers to how a firm take risk, conduct experiments and innovate in order to attain success in project undertaken. Further, exploitation deals with refinements, efficiencies, implementation, and execution in order the stakeholders achieve project success in this case the aviation industries (Zaidi & Othman, 2015). Exploring is key the function of the company allowing a firm exploiting and utilizing business knowledge in implementing, delivering and make profit so a to justify existence. In addition, firms ambidexterities are the abilities to instantaneously follow incremental and discontinuous technology from hosting or using many clashing structures, inconstistence processes and contradicting cultures in the organization to achieve project success. Moreover, Birkinshaw and Gupta (2013) noted that ambidexterity is valuable manner of mounting the constrains firms encounter to manage two contending objectives/goals within similar period.

Contextual ambidexterity is an imperative in any firm globally. In United State of America (USA), Schmidt and Roseberg (2014) noted that Google company is great example of integrating contextual ambidexterity to its projects. Google invented an organizational

context in which engineers are assigned tasks with an objective of organizing the information globally. In addition, engineers are allowed twenty percent free time for pursuing exploratory projects of their own choice. In addition, numerous side projects have been transformed as successful ventures (Schmidt & Roseberg, 2014). Further, contextual ambidexterity allows employees to explore without restrictions particular concurrently or business units in exploring hence, enabling exploration to emerge in unintended manner.

In New Zealand, Turner, et al. (2017) innovation capacity is used as strategic ambidexterity in the agricultural sector. A paradigm that conceptualised nested configurations of capabilities at many stages in the Agricultural Innovation Systems “(AIS)” were used in two projects which handled successfully land management and/or agricultural problems of various complexity that is to improve lamb survival; and managing land sustainability. Further, the study showed that technology innovation capacities constitute project actors to interact with AIS actors to configure capabilities or resources at various stages of the AIS in positively leveraging the project dependencies pathways (Turner, et al., 2017)

The Indian aviation industry have recorded growth in the number of passengers traffic for the last twenty years with estimated growth continuously of a minimum of one decade. The already remaining investment strategies of passenger capacities in the terminals. In addition, Indian airports operation rose from 230 to 370 million passengers from 2012 to 2017 “(Planning Commission, Government of India, 2012)”. In handling the increase of passengers and cargo, the country requires simultaneously to invest in developing new

airports that were projects in minor towns and/or areas which are remote and expanding and modernizing of existing airports. India has 456 airstrips and airports out of which estimated 180 are required to have been functioning over a decade ago (Chandrashekhar & Banerjee, 2017).

A major ambidexterity research was a mega engineering projects on “Sutong Bridge construction project in China” which used 920 million US dollars (Liu, Wang, & Sheng, 2012). The bridge has a huge span and the piles which form the deepest bridge foundation of 120 meters globally. It have 300.4 meters towers resting on the worldwide’s biggest pier base that is anchored within 131 meters “friction piles” casting deeper into the riverbed. This pile work of the Sutong Bridge project show that ambidexterity was attained during the life-span period of the mega project in engineering arena. This was achieved through new solutions exploring in the beginning stage of the piling works afterwards, early setbacks and/or then exploitation of afresh learned knowledge in fast completing the piling works. In addition, “Netaji Subhash Chandra Bose International (NSCBI) Airport construction project” demonstrated exploratory learning zones two and six exploited to attain efficiency scheduling in zone one (Liu et al., 2012).

In Nigeria, Yacoub, Udechukwu, Terry and Alasdair (2019) studied the abilities of project portfolio management practices in supporting the quest of ambidexterity in project levels by engaging certain mechanisms and dimensions. The primal objective was to examine the business operating framework and difficulties imposed on the organizations and were considered resolvable by the simultaneous persuing multiple projects emphasizing strategic goals which are contradictory. Another, study in Nigeria is by Onwughalu and Amah (2017) on ambidexterity and companies resilience on telecommunication

organizations which operated in Port Harcourt, Rivers State. The study demonstrated how ambidextrous managers respond to changes in business environment by exploiting and exploring activities.

Organisational ambidexterity is applicable in all sectors in Africa. In South Africa, Chibaya (2016) presented a perspective of retailers on organisational ambidexterity in emerging markets of retail companies. The research noted that there was existence of ambidexterity that is to explore and exploit done by the retailing organizations. The study further gave insights that these companies utilized collaborations with informal independent retailers to attain a clear understanding of emerging markets in the township. In addition, a deeper comprehension on how formal independent retailers in South Africa put together their capability with informal independent retailers in creating hybrid business frameworks that is utilized in exploring new markets in township while the existing capabilities are exploited.

1.2.3 Aviation Industry in Kenya

Aviation sector is the fastest growing economic sector within Kenya. The aviation industry sector is regulated by the “Kenya Airports Authority (KAA)” an autonomous/independent parastatal organ formed in year 1991 by parliamentary act. KAA responsibilities are to provide and manage system of airports in a coordinated manner. In addition, a former “Erstwhile Aerodromes Department under the Ministry of Transport and Communication” handled these responsibilities and was in charge of “Nairobi's Old Embakasi Airport” constructed by colonial government in mid 1950s (KAA, 2019).

KAA is tasked in the vision 2030 towards ensuring that Kenya becomes the aviation hub in the African region with an annual capacity of 45 million passengers by 2030. To achieve this, the Kenya governments Medium Term Plan (MTP) that targets the implementation of the following key projects: First is the construction of terminal 1A departures and arrivals at JKIA and constructing of “green field terminal”. Secondly, runway and linked facilities in JKIA; Improving of terminal and/or airside capacities at “Kisumu International Airport”; Improving safety, and/or support operations at Moi International Airport; and rehabilitating, and upgrading works on other airports and airstrip including Wajir international Airport involving fencing and construction of extension of runway, and taxiway & Apron.

Project success is a key goal of any project. According to study by Nyamwange and Nyang’au (2018), noted that the completion rate of projects in KAA have not been on a good score, for example of the construction of the second JKIA runway which stalled after 23% completion rate, the Greenfield terminal building at JKIA which stalled after 22.5% completion rate, construction of training academy at KAA HQ which was expected to complete in February 2016 but only 75% works completed to date, construction of terminal building that is waiting shed at Lodwar airstrip which was expected to take 9 months but completed 2 months behind schedule with an overrun in cost and many other projects which are or finished behind schedule.

1.2.4 Wajir International Airport

There are many aviation supporting facilities in Kenya. Airports are an integral component of the aviation sector. There are many airports in Kenya, these are classified into domestic

and international. This study used the Wajir International Airport as a proxy for aviation sector in Kenya. Wajir international Airport is assigned the code “WJR” by International Air Transport Association (IATA); also, has been allocated the code “HKWJ” by International Civil Aviation Organization (ICAO); and is situated in Wajir town (Njanja, 2018). Kenya Airports Authority (2020) noted that airport is approximately situated 495km or 308 miles “northeast of Jomo Kenyatta International Airport (JKIA)” and is located 231 meters from sea levels; and the airport contains single runway which measures 2795 meters. Geographically “coordinates of the airport are: 1° 43' 48.00"N, 40° 5' 24.00"E. Between 1977 and 1978 the airport was constructed by an “Israeli construction Company” initially as a “military airbase for the Kenya Air Force” (Kenya Airports Authority, 2020). In 2006, government of Kenya cancelled scheduled flights directly to and/or from Somalia due to security issues. One of the conditions for lifting of the suspension was that every flight had to stop at “Wajir Airport” for customs checks, immigration issues and security screening before moving to their next destinations in Kenya. The KAA then outsourced constructing of another terminal within the airport and assigning relevant authorities to run the facility. Moreover, in year 2007 the “Wajir Airport” was commissioned officially to operate civilian and/or military flights (Munyaira, 2019).

Wajir Airport presents a unique concept of operations as an airport, where most of its air traffic is due to the government directive for all flights from Somalia to pass through Wajir Airport (except for authorized flights only). This was initiated by the Kenya government as a security stop measure towards terror attacks and risks associated with direct flights to Nairobi from Somalia. However, this directive has created another hurdle on business perspective for flight operations transiting through Wajir; one, is it economical – this is due

to extra fuel burn, extended crew duty time, extra ground handling costs, extra landing fee and navigation fee; two, repetitive processes - that is, both security and immigration are repeated at Wajir and final destination; and three, challenge in the existing airport infrastructure at Wajir- that is, condition of the runway/taxiways, apron and terminal building.

1.3 Statement of the Problem

The Aviation sector globally and in Kenya is dynamic. While the aviation sector is required to meet its current obligation using available (exploit) resources, there is also the challenge of fostering new strategies (explore) to make the sector modern and meet the dynamic changes in the aviation industry (Kenya Airports Authority , 2020). Kamani (2018) noted that infrastructure of Kenyan aviation is still lagging behind the rest of the world. In comparison with other airport like in Abidjan in Cote d'Ivoire and Casablanca in Morocco where the airport terminals are of a superior standard.

A few inconclusive studies on ambidexterity have been conducted in Africa. Omran et al. (2012) research in “Sudan” found in spite of great number of recorded cases construction projects both simplest and/or more intensive projects had progressively registered cost overruns. Gaba (2013) study found a rise in overruns cost, delay in completion, not satisfactory and/or not met objectives of projects within aviation sector. In another study, Olatunji (2010) while examing the issue of delays in “South Africa aviation projects” recorded a marvel that relates to client representative inability and lack of comprehensive view by the project team beginning from inception to closing.

In addition, more research gaps were derived from “Nölleke-Przybylski, et al. (2019)” study on “patterns of structural and sequential ambidexterity in cross-border media

management”, using semi-structured interviews, thus the study will fill the gaps of the dimensions of ambidexterity in aviation industry using a structured questionnaire. Moreover, Weerd-Nederhof (2017) conduct a study on “sequential ambidexterity in practice” which was “longitudinal study on shifts from exploration to exploitation and reverse”. However these studies did not examine the influence of sequential, structural and contextual ambidexterity on project success. Therefore, this study investigated the influence of ambidexterity approaches namely sequential, structural contextual on project success with aviation industry in Kenya.

1.4 Purpose of the Study

The purpose of the research was examining influence of ambidexterity approaches to project success within aviation industry in Kenya.

1.5 Objectives of the Study

The research was built on both specific and general objectives as follow: -

1.5.1 General Objective

The wide-ranging objective was to examine the influence of ambidexterity approaches on project success within the aviation industry in Kenya.

1.5.2 Specific Objectives

The other examined objectives were:

- i) To examine the influence of sequential ambidexterity on project success within the aviation industry in Kenya.
- ii) To analyze the influence of structural ambidexterity on project success within the aviation industry in Kenya.
- iii) To determine the influence of contextual ambidexterity on project success within the

aviation industry in Kenya.

1.6 Study Hypotheses

The hypotheses of this study which were evaluated as null hypothesis (H_0) as follows:

- i) **H₀₁** – there is no significant relationship between sequential ambidexterity and project success.
- ii) **H₀₂** – There is no significant relationship between Structural ambidexterity and project success.
- iii) **H₀₃** – There is no significant relationship between Contextual ambidexterity and project success.

1.7 Significance of the Study

The research/study benefited to the government who were the key stakeholders of Wajir International airport. In that they government understood how ambidexterity can be utilized to achieve project success. In addition, the employees or staff of Wajir International airport benefited from the findings of the study on the influence of ambidexterity in success of the projects undertaken by the organization. Further, the passengers who are the customers benefited from the outcomes of the research in that they gained understandings about the ambidexterity influence on project success within the aviation industry in Kenya. Finally, the researchers and academicians benefited on the reviews of literature and results of the research on influence of levels of ambidexterity on project success within the aviation industry in Kenya.

1.8 Scope of the Study

The research recognized that there were numerous factors influencing project success but the research only focused on three ambidexterity variables that were: sequential, structural

and contextual. There were many airports in Kenya that are operated and regulated by Kenya Airports Authority that have many projects however this study focused on “Wajir International Airport in Wajir county Kenya”. While “Wajir International Airport” has many operations, this research concentrated on influence of ambidexterity on project implementation with a focus on project success.

1.9 Limitations of the Study

This study face the challenge of literature influence of ambidexterity on project success within the aviation sectors in Kenya. Besides, the researcher supplemented this with other studies from other countries. Also, the study encountered a constrains in data collection since some of the participants specificaly top management may be uncomfortable in responding to the questions on influence of ambidexterity approaches on project success within the aviation industry in Kenya as they feared that the information might be accessed by competitors. Bu, the researcher explained that data gathere just for academic use.

1.10 Delimitations of the Study

The research was about influence of ambidexterity approaches on project success within the aviation industry in Kenya in Wajir region. One of the delimitations was that the research studied only three ambidexterity approaches which include: contextual, structural and consequential. Secondly, the research was anchored to three theories that are: dynamic capabilities, resource-based, and organization theory. Finally, a sample population targeted top management, lower management and general staff.

1.11 Assumptions of the Study

According Leedy and Ormrod (2010) alluded that assumptions are so fundamental and not having them then the research problem should not be in existence. One major assumption

was that the sample size selected was representative thus, the findings can be generalized. Secondly, the study assumed that all respondents provided relevant information needed for the research candidly and honestly. Finally, the research assumed that descriptive design was the most suitable procedure since the approach helped in investigating the variables without the researcher manipulating the findings.

1.12 Theoretical Framework

The theoretical framework consisted of dynamic capabilities theory resource-based theory and organization theory as discussed below.

1.12.1 Dynamic Capabilities Theory

The study applied the dynamic capabilities theory to explain the influence of ambidexterity approaches on achieving project success. “Dynamic capabilities theory (DTC)” arose from an extension and/or reaction to counter inabilities of “resource-based view” on interpreting “development and redevelopment” of resources or capabilities in addressing hastily changing environments (Teece, Pisano, & Shuen, 1997). Bao-jie (2010) noted that dynamic capabilities of an organization is the abilities of integrating, building and reconfiguring external and internal competences so as to improve operating capabilities and making contribution in adapting swiftly to changing environments through use of ambidexterity by exploiting or exploring. In addition, Wang and Ahmed (2007) indicated that dynamic capabilities were behavioural orientation of an organization to recreate, integrate, renew and reconfigure constantly its capabilities and resources, and/or upgrade and reconstruct core/main capabilities in responding to dynamic environment and gain sustainable advantage competitively by choosing whether to explore or exploit and some firms using them concurrently. Moreover, capabilities determine the ambidexterity approach for

instance a firm with few resources will adopt sequential ambidexterity that applying each strategy at time (Wang & Ahmed, 2007).

Dynamic capabilities theory explains more on the role of organizational or firm routines. The role of main new routines and readiness of changing existing routines is vital for project success in aviation sector, unlike other firms where changes may done to manufacturing employee's capabilities, aviation sector requires employees to get new skills in order to operate the newly modified software or new service procedures (Sharma, 2016). Sometimes dominant designs usually are invented from trial and error; thus, they need major capital investments (Janssen, Castaldi, & Alexiev, 2015). Laursen and Salter (2014) indicated that routines unquestionably have major roles to play in ambidexterity if the firm to utilize it resources optimally. Wohlgemuth and Wenzel (2016) noted that dynamic capabilities depend on routinized processes. This determines whether task assigned will simultaneously be exploited or explored which represent structural ambidexterity.

Moreover, zero level capabilities are stationary process whereby an organization just continues its ordinary daily operations. When dealing with services the first order capabilities are those that changes the project performance. On the other hand, capabilities of higher order involve those capabilities facilitating modification and creation of dynamic capabilities in a manner which changes the game or in a manner which takes the firm to a higher level which may involve structural ambidexterity. Further, Fainshmidt et al. (2016) alluded that capabilities of lower order can be learnt whereas dynamic capabilities of higher order are learnt in new manner for effective and efficient assimilating new knowledge. For instance, higher order capabilities occur when a firm conduct out research and development

to change the existing capabilities using the available resource that demonstrate contextual ambidexterity. (Fainshmidt et al., 2016). Both lower-level and higher-level capabilities are necessary to facilitate exploring and exploiting which enhance project success.

Exploration necessitates the company to uninterruptedly reconfigure capabilities in order to meet changes in external and internal environment through sequential, structural or contextual ambidexterity (Wohlgemuth and Wenzel, 2016). Also, exploitation needs companies in having a behavioral mechanism intact encompassing absorption of new techniques into existing routines sets. Moreover, an organization which pursue exploitation is path dependent having distinct firm processes or routines which are dimensions of strategy in dynamic capabilities theory.

The importance of ambidexterity in aviation sector is viewed both ways that explorative and exploitative depending on the type/kind of project being explored. Aviation companies either explore or exploit in achieving project success. Further, they require resources and capabilities in engaging in mega projects (Fainshmidt et al., 2016). The aviation sector can utilize three distinct pathways in achieving ambidexterity first is by temporal separation between exploring and exploiting for a period of time which sequential ambidexterity. Secondly, is by involving equally exploration and exploitation concurrently which is simultaneous or structural ambidexterity. Finally, by separating to explore from to exploit over distinct domains (Fainshmidt et al., 2016).

Exploration require a higher degree of risk which need greater firm efforts and commitment of resource. Firm's exploration is taken as pursuit of new knowledge, utilizing of unfamiliar technologies to create products or services (Fainshmidt et al., 2016). Firms using short term goals and have few resources cannot pursue exploration as they require long-

term wins. Exploitation requires lower degree of risk and less effort thus few resources are needed which call for sequential ambidexterity approach. This theory, therefore, anchors ambidexterity approaches namely sequential, structural and contextual ambidexterity.

1.12.2 Resource Based Theory

The theory of resource based is a classical view of management principle explaining the way in which ambidexterity type or approach affects the changing capabilities of a firm at a given time (Teece, Pisano, & Shuen, 1997). From the theory the company is a collection or set of skills or assets. In the modern world, the common assets and capabilities are mainly intangible. The performance of the firm is grounded on the skills that are distinctive from any other firm. The theory suggest that the firm must have characteristics which are not replicated by the other firms in the industry.

From the view of competitive positioning attributed to Porter's works to the resource-based view (RBV) linked with the dynamic abilities backed by Teece et al. (1997). In Porter's work 1980 and 1985 concentrated on the external effects on firms, strategies are the reproduction ways of making utilizing such like forces. Further, "RBV" holds that an organization is unique packs of resources, capabilities and competitiveness is attained when resources are leverage that the firm employ through sequential, structural or contextual ambidexterity. Capabilities indicates organization's abilities of integrating, building and/or reconfiguring internal and/or external competencies to quickly respond to the changing environments by using ambidexterity approaches (Teece et al., 1997). It is the interaction of internal resources and external resources. In addition, aligning between a firm's strategies and environment externally is easier to attain due to market conditions which are relatively stable, classical criterion of strategies used a vivid route to plan,

execute, and/or control and this will entail structural ambidexterity approach as the firm is dealing with two dynamic environments. When the forces strengthen, changes are possible as the organization or projects must be adjusted, then with fewer resources the organization can sequentially exploit or explore.

Most of the time the organization is faced with uncertainties and at this time the firm can use sequential ambidexterity (Bennett & Lemoine, 2014). Moreover, there are shifts of angles in strategic management indicating the external environments (Priem, Butler, & Li, 2013). In addition, to evaluate how heterogeneity among an organization's immediate resources influence the viability of numerous strategic responses to essential innovation changes, hence, the firm can achieve project success. This theory holds firm on ambidexterity approaches namely sequential, structural and contextual ambidexterity.

1.12.3 Organizational Theory

The final theory that the study will be pinned on is that of organization theory especially on structural ambidexterity which is based on organization structure. Hatch (1997) noted that organization theory can be traced from notions developed or invented during the beginning of "Industrial Revolution in the late 1800s and early 1900s" from the work Max Weber. Organizational indicates set of concepts and definitions interrelated explaining behavior of individuals/groups interacting with each other in performing activities geared towards accomplishing a shared goal. Adler et al. (1999) referred to ambidexterity as the firm's abilities of pursue two different things (aviation projects) within a period of same time, with flexibility and efficiency. March (1991) noted that ambidexterity is key factor in surviving and prospering of any project and is specifically attained by sustaining a balance between activities of exploitation and exploration. Exploitation comprises of

factors like refinement, production, choice, efficiency, implementation, execution, and selection while exploring involves factors like search, risk taking, variation, playing, experimentation, flexibility, innovation and discovering (March 1991).

Moreover, for an organization to exploit and explore it needs different management styles, structures, processes, cultures and values Govindarajan and Trimble (2010). Hence, the firm should select which one that should be emphasized when allocation resources. Gibson and Birkinshaw (2004) notes that exploitation initiatives focus on solutions inside the already existing technologies and viability of the aviation projects hence, guaranteeing return on investment and project success. Contrary, exploration initiatives examine solutions beyond already existing technologies and viabilities of the projects, hence, are vague, not certain and slow producing results (March 1991).

In addition, aviation industries may increase likelihoods of prosperity of project success through higher risk explorative projects investment in combination of exploitative projects “(Tushman & O’Reilly (1996)”. “Gibson and Birkinshaw (2004)” expounds that for an organization to achieve ambidexterity and project success, it must focus on structural or contextual ambidexterity. Structural ambidexterity is achieved through separating whether to use exploitation and exploration activities by changing the structures of the organization, specifically by separating spatial settings, separating temporal settings, or separating teams and organizations in order to achieve project success. Gupta, Smith and Shalicy (2006) states that contextual ambidexterity can be pursued by organizational context that consist of process and culture factors for instance, management support, discipline level and management system performance. This theory anchors ambidexterity approaches namely sequential, structural and contextual ambidexterity.

1.13 Conceptual Framework

The study identified the conceptual framework that represented the independent and dependent variables. Bhattacharjee (2012) noted that conceptual framework is a diagrammatical representation of the variables which are independent variables and dependent variables. “Kumar, Talib and Ramayah (2013)” also, stated that variables which are independent can scientifically be manipulated through testing the influence of ambidexterity. Moreover, “Marilyn and Jim (2013)” note that dependent variable is a quantity subjected to measure and test project success as in figure 1.1.

Independent Variables

Dependent Variable

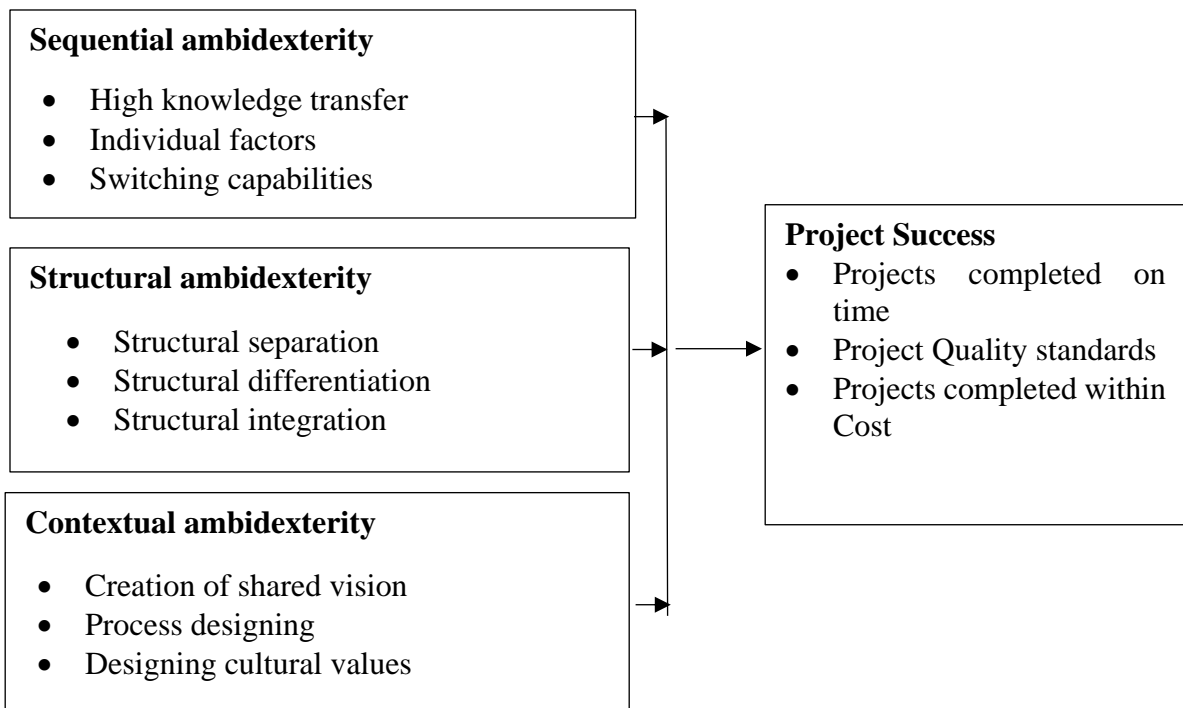


Figure 1.1 Conceptual Framework

Source: Author (2021)

From the Figure 1.1 sequential ambidexterity is indicates that a firm will focus on one of the objectives that is competing after another. Sequential ambidexterity will be measured

by the ability to transfer knowledge, using of individual factors to achieve project objectives and switching capabilities (Du & Chen, 2018). Also, structural ambidexterity may be called simultaneous ambidexterity indicates that a firm assigns tasks that are different to sub-units which are different in the firm as balancing way to explore or exploit trade-off through utilizing organizationally distinct strategic integrated business sub units which have various systems. It will be measured using structural separation, differentiation and alignment (Heracleous et al., 2017).

Further, contextual ambidexterity is a scenario that every firm member switch between to compete tasks that is exploiting and/or exploring when opportunity arises. This form of ambidexterity behavioral capacities deals simultaneously in attaining adaptability and alignment at business level units in that aligning is consistency with all the patterns or trends of business activities in the exploitation by business units. This will be measured through identifying whether there is creation of shared vision, process designing and designing cultural values (Zaidi & Othman, 2015). Finally, project success refers to achieving the objectives/goals and the planned results/outcomes by complying with conditions which are predetermined such as; time, quality, cost, stakeholder's perceptions and performance. (Ioana, Emil, & Razvan, 2015)

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The chapter present review of empirical literature on influence of ambidexterity on project success in aviation industry using specific objectives outlined in chapter 1. Also, the chapter analyses in depth previously studied literature in the area of ambidexterity proxies in this study namely sequential, structural and contextual ambidexterity. Finally, the chapter summaries and identifies knowledge gaps.

2.2 Review of the Literature

The review of the literature presents the findings of other researcher on sequential ambidexterity, structural ambidexterity and contextual ambidexterity as follows.

2.2.1 Sequential Ambidexterity and Project Success

Sequential ambidexterity means to maintain the balaance or to mitigate the conflicts between exploration and exploitation. Sequential ambidexterity indicates that a firm will focus on one of the objectives that is competing after another (Du & Chen, 2018). Alignments required for innovation and efficiency companies are required to shift their structures over time to align the structure with the corporate's strategy; that is, organizations attain ambidexterity in a sequential fashion by shifting structures over time.

A study indicating the empirical evidences of how sequential ambidexterity influence the project performance. "Nölleke-Przybylski, et al. (2019)" study on "patterns of structural and sequential ambidexterity in cross-border media management in Austria", using semi-structured interviews with managers international media, captured patterns or trends of ambidextrous to strategize and/or organize in "cross-border media" operations. The research results revealed that exploitation is vital on how patterns or trends of

ambidexterity levels, significantly differed dependently on the media type/kind and the company's background/history. The study focused on digitisation that transformed the opportunities of balancing to explore and/or exploit internationally, thus the study filled the gaps of the dimensions of ambidexterity in aviation industry using a structured questionnaire.

Sailer (2019) investigated that “project management methods as a way to ambidexterity.” The study theorized how project management methods affect ambidexterity on the project level. In addition, the research demonstrated how routine theory added to a better theoretical conceptualization and understanding of project management methods. The analysis contained, first, the reconstruction of the contribution of each action in “Scrum” to either exploitation or exploration and, second, the discussion of roles in Scrum. The main findings suggested that Scrum facilitates sequential and contextual ambidexterity by producing a pattern of alternating exploitation and exploration actions and by assigning specific roles.

Also, the evidence on how organization shift from exploiting and exploring and vice versa through sequential ambidexterity was identified. Visser, Faems, Visscher and Weerd-Nederhof (2017) conducted a study on “sequential ambidexterity in practice which was longitudinal study on shifts from exploration to exploitation and reverse in a fast growing research and development organization in the wind power industry.” The research provided access to a exclusive collection of time period accounting data, and descriptions of all research and development projects conducted in a hundred months timeframe. In addition, the study by text mining of the documents measured the dynamics of exploring and exploiting levels visualizing in detail how an organization going through transitions focusing from to explore and to exploit or vice-versa. The findings of the research based

on a sequence of interviews with staff of the firm demonstrated how structural, and individual factors interacted together impacting the shifts from exploring to exploiting hence, achieve project success.

Further, empirical evidence indicated on the use of temporal switching from explore to exploit through sequential ambidexterity. Chou, Yang and Chiu (2017) study proposed the concepts of temporally switching capabilities to well understanding of the process through which sequential ambidexterity is achieved in Taiwan. Further, the research hypothesized that performance influence were contingent upon organization unique factors like a company's business strategies, absorptive capacities and firm's improvisation. The study used three data sources comprising of annual reports, secondary database and survey administered to one hundred and forty five companies in the electronics sector with ten-year observations. The results of the study found that the temporally switching capabilities relates positively to new products' performance and/or business strategies' types, and absorbing capacities had moderate influence and firm improvisation.

In addition, the empirical evidence on sequential ambidexterity examined the relationship between organization performance and ambidexterity. "Boumgarden, Nickerson and Zenger (2012)" explored "the relationships among ambidexterity, vacillation and organizational performance." The study proposed two approaches to achieve instantaneously high exploration levels and/or exploitation through ambidexterity using firm vacillation. The research analyzed cases that were canonical from literatures trends of making decisions corresponding to performance for a certain time period. The results found that vacillation offered greater long-run performance and ambidexterity enhanced profit

performance when greater epochs of vacillation were used. The study filled the gap of aviation industry determining the approaches of ambidexterity.

Also, the empirical evidence sequential ambidexterity investigated how to overcome tensions which are inherent organization is exploring and exploiting. Goossen and Bazazzian (2012) research identified several mechanisms of overcoming inherent tensions between exploring and exploiting within. The study focused on the method or approach of temporal separation where firms use alternate between periods understudy on discovery, and experimentation, and times to concentrate on refinement, and efficiency. The finding indicated that innovation ambidexterity of Fortune five hundred companies for period ten years showed that firms rich in financial, and technological resources benefit from a lot from radical implementing of dynamic sequential ambidexterity comparing it to static simultaneous approaches. The research was based on inherent tensions consequently, the study therefore determined the approaches of ambidexterity on project success in aviation industry.

Schelling, Jacobsson and Oesterbeck (2018) explored “how sequential and contextual ambidexterity influences decision making within an organization. The study entailed a qualitative single case study in the aeronautics and defense industry, where ten semi-structured interviews have been conducted. The findings indicated that sequential ambidexterity has an impact on decision making.

Alos-Simo, Verdu-Jover and Gomez-Gras (2020) study proposed a model to analyze the factors that affect eco-innovation, as well as eco-innovation’s effects on dynamic ambidexterity. The research developed a research model with panel data from 449 firms over five years from the telecom industry in Spain and tested the model using structural

equations and partial least squares. The results showed a slightly ordered sequence of exploration and exploitation results, indicating that some equilibrium between the two orientations is necessary.

2.2.2 Structural Ambidexterity and Project Success

Structural or simultaneous ambidexterity implies that an organization allocates different tasks to different sub-units of the organization. Also, structural ambidexterity may be called simultaneous ambidexterity indicates that a firm assigns tasks that are different to sub-units which are different in the firm as balancing way to explore or exploit trade-off through utilizing organizationally distinct strategic integrated business sub units which have various systems (Heracleous et al., 2017).

The structural ambidexterity involves to assign exploring and exploiting within separate project activities with the management balancing two, while developing and creating a shared vision to deter tensions which may be intra organization. Hansen, Wicki and Schaltegger (2018) conducted a study on structural ambidexterity investigating processes of transition and understanding how top managers vigorously configured and reconfigured exploring–exploiting boundary over time. The research theoretical input gave a paradigm of 6 integration trade-offs that is complementary exploratory associated with: contamination; early legitimacy seeking compared to discontinuation frustrations of technology; spanning boundaries by rotation of job compared to moving on with culture that is old; compared to transferring that is premature; reorganization compared to mutation capabilities; and/or improved access of core or main firm resources compared to starvation of resource. The research found that research and development and top level management in utilize integration mechanisms in structural ambidexterity bearing risks of cross

contaminations between exploiting and/or exploring structures and hence, unavoidably associated to trade-offs.

Structural ambidexterity enhance the creation of project processes that have competencies, with efficient processes and formidable cultures which are aligned internally and precisely customized so that their explore or exploit to achieve project success. Zaidi and Othman (2015) study aimed comparing and contrasting the influence of structural ambidexterity, and contextual ambidexterity in Malaysia report that although both concepts are essential, the impacts performances of new products development. The research focused on manufacturing industry in Malaysia. The study data was gathered using questionnaire survey focusing on production managers. The findings derived from “correlation and linear regression analyses” showed that structural and contextual ambidexterity were undeniably unlike in influencing new products development performance.

In cases where project activities focus on exploiting typically they follow a designed mechanistic where making decision is centralized interrelated together with highly valued cultures, observing efficiency and tight control. On the other hand, project activities that are explorative making decision decentralized with cultures that are more entrepreneurial and flexible. Chen (2017) study on “structural ambidexterity” placed exploring and exploiting into structural separated firm units which were operated by top level managers. The research found that structural ambidexterity influences the performance of projects. In addition, Mudambi and Tim (2014) research found that structural ambidexterity fostered exploitation to be contained to various business units and exploring confined to other firm units and coordination was attained by senior level managers.

Further, applying of structural ambidexterity allows manager to develop integrating mechanisms, and to manage tensions between exploring and exploiting units. Heracleous, Papachroni, Andriopoulos and Gotsi (2017) study on organizational dysfunctions interfering with implementing of structural ambidexterity as dynamic capabilities. The research found that firms' dysfunctions gave rise to competency traps attributed to interlinked cognitive firms and/or behavioral dimensions, which harshly compromised structural ambidexterity. Further, findings were that inventions of explorative units were considered as external in the firm's focal, mirroring the environmental changes of portfolio resources with the milieu of strategic alliances.

Finally, when managing exploring, and exploiting strategic measures must be created for reconciling tensions within organizational levels through budget allocation management in possibly activities that conflict with each other in order to achieve success of the projects undertaken by the organization. García, Cortés, Lajara, Sáez and Lillo (2018) study on "high performance work system and performance: opening the black box by the organizational/firm ambidexterity and human resource flexibilities." The study findings showed that structural ambidexterity puts enormous job demands on top managers.

Liu and Leitner (2012) conducted an in-depth case study of a complex infrastructure project facing unique challenges and tight budget and schedule, investigates the antecedents of ambidexterity and the effect of ambidexterity on project performance. The research findings revealed that structural separation ineffective because of the constant cycling between exploration and exploitation in projects.

Eriksson (2013) explored organization's capability to both exploit existing knowledge and technologies for short-term profits. The study dealt with project-levels and project-based

organizations. The findings were that structural and sequential separation of exploration and exploitation activities at business unit, project portfolio, and project levels do not solve the paradox, due to lack of integrating mechanisms. Hence, the construction industry suffers from inadequate extent of exploration, while the extent of exploitation is not reaching its potential.

2.2.3 Contextual Ambidexterity and Project Success

Contextual type of ambidexterity is defined as a situation where each member of the organization can switch between the competing tasks of exploitation and exploration as the demand or opportunity arises. This form of ambidexterity behavioral capacities deals simultaneously in attaining adaptability and alignment at business level units in that aligning is consistency with all the patterns or trends of business activities in the exploitation by business units (Zaidi & Othman, 2015).

In a study of the “antecedents and impacts of ambidexterity in project teams”, Liu and Leitner (2012) utilizes indepth case research of complex infrastructure projects facing special challenges, and financial constraints, and schedule on demonstrating the required simultaneous quest to innovation/technology and efficiency in complex or mega engineering projects. The research hypothesized that exploration, and exploitation were required for succeeding in complex engineering projects. The research found that ambidexterity in project teams significantly contributed to project performance; the influence of “temporal separation”, and “project context on project performance” were mediated by the extent of ambidexterity by project team. In addition, contextual ambidexterity was attained by individuals empowering in deciding on the duration spent on exploring operations or exploiting activities and aligning, and adapting of

organizational/firm activities and capabilities which must be ensured to meet changing demands.

When dealing with contextual ambidexterity employee's spontaneously allocate their time whether to engage in exploring and exploiting within the same project activities Jingjing and Zhongwei (2018) study on "applying organizational ambidexterity in strategic management under volatility, uncertainty, complexity, and ambiguity (VUCA) environment which was evidence from high tech companies in China." The research considered multilevel perspectives on the kind of firm ambidexterity, and its strategy functioning management process. The study found that mechanism of organizational ambidexterity is influenced by management function in more turbulent environment and contextual ambidexterity can be pursued exploration, and exploitation by allowing employees to select whether to explore or exploit.

In addition, contextual switching enables units of business to flexibly responding to changing demands without managing tensions among disparate project activities. Herhausen (2016) research on investigated the "ambidextrous influence of its proactive and responsive dimension offering a fresh perspective on market orientation". The study hypothesized with two (2) wave panel data survey from one hundred and sixty seven strategic business/firm units. The study findings from "time lagged performance data", and "polynomial regression" showed a balance between market which were proactive and market responsive positioning had heightened positive influence on performance.

Moreover, contextual ambidexterity involves processes, systems, and organization beliefs shaping individual's level behaviors within the organization. Ossenbrink, Hoppmann and Hoffmann (2018) investigated "how the environment shapes a firm's use of structural and

contextual ambidexterity; which is longitudinal case study from four largest electric utility firms in Germany.” The study findings showed that environments attributed by chances which were many and need culture that is novel, and capabilities leading to firm investing in inventiveness combining aspects of “structural and contextual ambidexterity” called hybrid ambidexterity. In addition, the study found that ambidexterity techniques were affected by perceptions of top-level managers on capabilities and available opportunities.

Also, when dealing with aviation sector contextual ambidexterity is vital as the environment is high dynamic and uncertain sometimes. Popadić and Milohnić (2016) study applied a bibliometrics analyses combining qualitative literature reviews in reconciling mixed findings of past studies and achieve a extra comprehensive knowledge on in ambidexterity field grew, and progressed in the last twenty-four years. The study findings highlighted the intellectual based studies in the ambidexterity fields and synthesized the numerous understandings to conceptualize ambidexterity.

De Clercq, Thongpapanl and Dimov (2014) investigated the roles of internal and external rivalry contextual ambidexterity in medium-sized enterprises (SMEs) in Canada. Using a sample of Canadian-based SMEs, the study shows that the contextual ambidexterityperformance relationship is suppressed at higher levels of internal rivalry and amplified at higher levels of external rivalry. The findings found that ambidextrous posture should not be an end by itself, and they point to the need for SMEs to understand how the features of their internal and external environments affect the performance consequences of such posture.

The evidence from Malaysia manufacturing sector by Zaidi and Othman (2015) on structural ambidexterity and contextual ambidexterity compared and contrasted the effects

of structural ambidexterity and contextual ambidexterity on the firms' performance of new product development. The study collected data through a questionnaire survey targeting product or production managers. The results of correlation and linear regression analyses revealed that structural ambidexterity and contextual ambidexterity are indeed dissimilar in their effects on new product development performance.

A Comparative study of UK and Chinese High-tech Firms by Wang and Rafiq (2014) investigated ambidextrous organizational culture, contextual ambidexterity and new product innovation. The study drew data from 150 UK and 242 Chinese high-tech firms. Results from structural equation modelling, revealed significant relationships between ambidextrous organizational culture, contextual ambidexterity and new product innovation outcomes; contextual ambidexterity mediates the relationship between ambidextrous organizational culture and new product innovation outcomes.

Calado (2019) explored study on "deepening the concept of contextual ambidexterity and assessing its influence on public organizations' performance." The collected sample was composed of 200 respondents who worked on the public sector. Results from confirmatory factor analyses and hierarchical regression analysis were depicted that alignment and adaptability were better represented as multiple factors, autonomy norm showed to reinforce contextual ambidexterity and with slight effect on performance.

2.2.4 Ambidexterity and Project Success

Project success refer to reaching the objectives and the planned results in compliance with predetermined conditions of time, cost and performance. Davis (2014) used in her paper a set of nine themes in order to describe success factors of projects: cooperation and communication, timing, agreeing objectives, stakeholder satisfaction, acceptance and use

of final products, cost/ budget aspects, competencies of the project manager, strategic benefits of the project and top management support.

Additionally, firms that combine ambidexterity approaches through leveraging their strengths will be in a position of improving project performance and enhance project success of completing projects on time and with the budget. Koryaka, Lockettb, Haytonb, Nicolaoub and Moleb (2018) study on “ambidexterity as a paradox whereby its components, exploration and exploitation, generate persistent and conflicting demands on a firm.” The study determined three antecedents of organizational/firm ambidexterity reflecting attention based view three principles. The study empirically was validated by a sample of four hundred and twenty two “small and medium-sized enterprises in the” United Kingdom “(UK)”. The study found that ambidexterity was reinforced through a blend of integration techniques and differentiation approaches.

Moreover, firms dealing with aviation construction projects require to evaluate ambidexterity approaches which are sequential, structural and contextual so as to identify how they can use the scarce resources to achieve project success. Choi and Lee (2015) conducted research on “dynamic resource allocation for exploitation and exploration with ambidexterity using logical mechanism and simulations.” The research found that team creativities came from the creativity revelation procedures by creation of knowledge through balancing exploiting and/or exploring. Also, the study found that logical mechanisms to allocating a team’s constrained resources to exploiting and/or exploring.

Study from Korean firms by Lee, Kim and Joshi (2017) conducted a research on “organizational memory representing stored organizational/firm knowledge and experience had favorable or unfavorable influence new product development performance

in technologically turbulent market.” The analysis was from Korean companies indicating amount of exploring and exploiting helped firm better use and benefits from firm memory for enhancing new product development performance. The findings showed that the interaction between firm innovativeness, and firm memory increased exploration, and exploitation.

A study on start up firms by Sinha (2015) research reviewed on exploration and exploitation dilemma managing growth of new ventures. The study focused on how firm environment is becoming progressively dynamic, thus becoming vital for businesses starting up to optimize resource allocation through exploring and exploiting operations. The research found that start-ups business focused on exploration of new and engaging in experimentation and thus in the process losing exploiting the outcomes of their exploration activities. Also, the study found start-up business over engaged in exploitation.

An empirical study from China by Weia, Zhaob and Zhangc (2014) investigated the “effects of ambidexterity on firm performance are different in firms with proactive or responsive market orientations.” The study projected six hypotheses and were investigated data from two hundred and three Chinese firms. The study found that a company with market orientation responsive exploiting had a positive influence where, exploring had a U-shaped influence on company performance. The study also, found that exploiting had no significance influence and exploration had a positive influence on company performance. Further, the research found that interaction to exploit, and explore had a negative influence on organization performance in a company with responsive markets orientation and had a positive influence in a company with proactive markets’ orientations.

Surendra, Dimitar and Kaveh (2012) investigated “ambidexterity and success in the Swedish Construction Industry.” The research collected information from the three leading Swedish construction companies through interviews and questionnaires. The analysis and measuring of the data were conducted in a qualitative manner. The findings of the study were that ambidexterity played a dominant role in the Swedish construction industry.

An empirically test in Pakistan from branches of telecom firms by Ahsan, Haider and Kayani (2020) explored the ambidextrous leadership on project success with innovation as a mediator and self-efficacy as a moderator. The sample was drawn using convenient sampling technique and data collected through survey method with a sample of 327 firms. The findings suggested that there is positive and significant relationship between ambidextrous leadership and project success.

A research from manufacturing companies in Jordan by Alshawabkeh, Abu Rumman, Al-Abbadi and Abu-Rumman (2020) examined project management to be integrated with knowledge management to induce ambidexterity and project success. In addition data was gathered from a sample of 350 managers dealing capital projects in the manufacturing firms. Results from partial least squares revealed the knowledge management was an integral aspect of project success, and had a significant positive effect on project success, but knowledge management did not induce ambidexterity, could not significantly enhance project success.

2.3 Summary and Research Gaps

The summaries and research gaps from the literature above on ambidexterity and project success were that on sequential ambidexterity, Nölleke-Przybylski, et al. (2019)” focused on “patterns of structural and sequential ambidexterity in cross-border media

management.” Thus, the study filled the gaps of the dimensions of ambidexterity in aviation industry using a structured questionnaire. In addition, Visser et al. (2017) concentrated on “sequential ambidexterity in practice which was longitudinal study on shifts from exploration to exploitation and reverse in wind power industry.” While the study left a gap, which was filled in aviation sector and project success.

Another summary was from Chou et al. (2017) focused on empirical review on temporally switching capabilities in understanding sequential ambidexterity. Hence, the study left a gap that was filled on influence of sequential ambidexterity on success of aviation projects. In addition, Boumgarden et al. (2012) was on “relationships among ambidexterity, vacillation and organizational performance.” The study left a gap that was filled the of aviation industry determining the approaches of ambidexterity to success of the projects. Also, Goossen and Bazazzian (2012) paper dealt with several mechanisms of overcoming inherent tensions between exploring and exploiting in the organization. The research left gaps on approaches of ambidexterity and success aviation industry projects.

Summaries on structural ambidexterity were firstly, Hansen et al. (2018) concentrated structural ambidexterity investigating processes how managers configured and reconfigured exploring–exploiting boundary over time. Therefore, a gap on aviation project success was left which was filled by this research thesis. Secondly, Zaidi and Othman (2015) compared the influence of structural, and contextual ambidexterity on performances of new products development in Malaysia. Thus, left a gap on aviation project success. Further, Chen (2017) research focused on structural ambidexterity through exploring and exploiting into structural separated firm units which were operated by top level managers, and which left a gap on aviation projects’ success. Thirdly, Andriopoulos

and Gotsi (2017) study, engaged on organizational dysfunctions interfering with implementing of structural ambidexterity as dynamic capabilities. Finally, the research of García et al (2018) concentrated “high performance work system and performance: opening the black box by the firm ambidexterity and human resource flexibilities.” The study left gaps on ambidexterity as it was on human capital.

In addition, on contextual ambidexterity, Leitner (2012) used in-depth case research of complex infrastructure projects faced with challenges which were financial and schedule to demonstrate contextual ambidexterity on mega engineering projects. Thus, the paper left a gap which was filled on contextual ambidexterity and aviation industry projects’ success. Also, Jingjing and Zhongwei (2018) applied organizational ambidexterity in strategic management under volatility, uncertainty, complexity, and ambiguity environment which was evidence from high technology companies in China.” However, a gap was left that was filled on contextual ambidexterity and aviation industry projects’ success. Additionally, Herhausen (2016) concentrated on “ambidextrous influence on market orientation”. Hence, a gap was left that was filled on contextual ambidexterity and aviation industry projects’ success. Finally, Hoffmann (2018) engaged on longitudinal case study on how environment determines a firm’s use of structural and contextual ambidexterity in Germany electric utility firms.” Thus, a gap was left that was filled on contextual ambidexterity and aviation industry projects’ success.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter focused on methodology employed in the research addressing study's objectives. In addition, the chapter identifies the research design, target population, rationale and research site, size of sample, and techniques of sampling, procedures for data collection, and analyses of data. Finally, the chapter identifies the validity, reliability and research ethical issue considerations.

3.2 Research Design

An empirical study has to be anchored on definite research design. "Sekaran and Bougie (2010)" stated that "research design" refer to plan guiding how the research is done. In addition, it is the procedure that the research employs to attain the objectives (Mugenda & Mugenda, 2008). Moreover, Kumar, Talib and Ramayah (2013) noted that research design is systematic inquiry/investigation by which the researcher directly influences on the variables. This study employed a descriptive cross sectional approach. The descriptive research design assists in investigating the study variables without the researching having the ability to manipulate or to tamper with the findings. Finally, use of cross-sectional study assist in analyzing the data gathered from a representative subset.

3.3 Research Site

The study was conducted in Wajir International Airport. The researcher selected the airport because the researcher is an employee in the named port. Kothari (2011) notes that it a setting on which the research is draw respondents. When the researcher is familiar with the research location resistance is minimized when gathering data (Kombo & Tromp, 2006). Finally, bias was reduced by using a representative sample.

3.4 Target Population

According to Bhattacharjee (2012), alluded that population comprises of all subsets of respondents with a common aspects. Since Wajir International Airport is small airport in the regions, the target population for this study will constitute 214 respondents who have valid airport passes. These are employees or stakeholders at Wajir International Airport. This will include the crew with frequent aircraft operation into Wajir.

Table 3.1 Population

Categories	Target Population	Percent
Top Managers	10	4.7
Middle Managers	20	9.3
Lower Managers	30	14.0
General Staff	154	72.0
Total	214	100.0

Source: KAA, Wajir Airport (2020)

Table 3.1 indicates that the target population contained 214 employees & stakeholders of Wajir International Airport.

3.5 Study Sample

The study sample consisted of sampling procedure and study sample size as discussed below.

3.5.1 Sampling Procedure

Where the target population is large, use of sampling technique is imperative. "Kombo and Tromp (2006)" indicated it is technique used to selecting respondents who produces data. Hence, sampling is vital since there numerous constraints in using whole population (Easwaran & Singh, 2010). This study employed stratified sampling that was 4 strata comprising of top managers, middle managers, lower managers and employees.

3.5.2 Study Sample Size

In research sample represent a particular population. A sample size comprise of subset of the research or study population that was utilized to represent the entire or whole population of the study (Kumar, Talib, & Ramayah, 2013). Information collected from the sample was generalized or deemed to represent entire population. The research will used the following formula Kothari (2004).

$$n = \frac{Z^2 pqN}{e^2(N - 1) + Z^2 pq}$$

Where: n is equal to size of the sample, N is total of population households, p is population like hood, p is given as 0.5 hence, “p + q= 1, e = margin of error given as 10% and $Z \alpha / 2$ is equal to the level of significance z is 1.96”.

$$"n = \frac{1.96^2 \times 0.5 \times 0.5 \times 214}{0.1^2(214 - 1) + 1.96^2 \times 0.5 \times 0.5} = \frac{205.5}{2.13 + 0.9604} = \frac{205.5}{3.0904} = 67"$$

Table 3.2 Sample Size

Categories	Population	Size of the Sample
Top Managers	10	5
Middle Managers	20	7
Lower Managers	30	8
General Staff	154	47
Total	214	67

The study used a size of the sample with 67 employes as calculated shown in table 3.2.

3.6 Data Collection

The study collected primary data. Data collection comprised of data collection instrument, pilot testing of research instruments, reliability, validity and procedure for data collection.

3.6.1 Data Collection Instruments

The research instrument to be used in this research was a questionnaire. In addition, the questionnaires included questions which were closed ended with answers pre-determined plus few questions that were open ended. Finally, the research questionnaire utilized a Likert scale of 5-point (Kothari, 2008).

3.6.2 Pilot Testing of Research Instruments

Also, pilot testing was done before data gathering process. It was vital to find whether the instrument had errors (Kothari, 2009). The study was conducted a pilot test of 10% of the respondents for clarity and completeness. Errors identified from the test were used to rectify and adjust the questionnaire before it is administered.

3.6.3 Instrument Reliability

According to Kothari (2008), reliability entails consistency where if the instruments were to be re-administered they would give the same results. Moreover, it involves the degree on which the question constructs are not biased allowing consistency within the questionnaire "(Sekaran & Bougie, 2010)". Finally, the research used Cronbach's alpha computed using SPSS. "Sekaran and Bourgie (2013): Creswell (2014)" indicated the acceptable alpha is 0.6 or nearer 1.

Table 3.3 Cronbach's Alpha Coefficient

Variable	Cronbach's Alpha Coefficient	Number of Items
Sequential Ambidexterity	0.884	7
Structural Ambidexterity	0.887	6
Contextual Ambidexterity	0.887	7
Project Success	0.668	6

Table 3.3 showed that all the variables were reliable as the Cronbach's alpha coefficient computed was above 0.6.

3.6.4 Instrument Validity

Validity indicate the extent to which sample test items shows what they are supposed to measure (Kothari & Garg, 2014). In addition, it is the extent the research correctly reflects or assessing what the researcher is trying to measure (Bhattacharjee, 2012). Thus, the research used content validity on the research instrument.

3.6.5 Data Collection Procedure

Data gathering process involved seeking approval from both “Africa Nazarene University and from the National Commission for Science Technology and Innovation (NACOSTI)”. In addition, approvals were sought from “human resources officer at Wajir International Airport” to seek mandate data gathering. Finally, questionnaires were emailed to the employees using google forms.

3.7 Data Processing and Analysis

Data analysis was conducted on primary data collected using SPSS version 25. As Kothari and Garg (2014) indicated that a simple graphical analysis are appropriate for studies. In addition, descriptive analysis included mean scores which showed ambidexterity approaches and standard deviation showed the variation among data analysed using SPSS version 25. Further, “Pearson’s correlation analysis, analysis of variance (ANOVA) and regressions analysis” as follows: $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + E$

Regression model comprised “dependent variable” (Y) – Project success, “independent variables” were: X_1 (Sequential ambidexterity), X_2 (structural ambidexterity), X_3 (Contextual ambidexterity), while ϵ was error term.

3.8 Legal and Ethical Considerations

"Ethical consideration" were the main matters considered in the research. The consideration were issues code of conducting the research "(Sekaran & Bougie, 2013)". Moreover, "Saunders et al., (2013)" indicates that ethical issues should be considered in the whole process of doing the research. One of the issues considered was that of confidentiality of the information revealed by the respondents. Further, the reseracher ensured all subjects participated at their own will.

CHAPTER FOUR DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter present data analysis and findings on influence of ambidexterity approaches on project success within the aviation industry in Kenya. In addition, the chapter present the response rate and demography of the respondents. Moreover, the chapter present the descriptive statistics, correlation analysis and regression analyses of the variables studied.

4.2 Response Rate

The study gathered data from respondents using questionnaires, where 67 questionnaires were administered to employees in “Wajir International Airport”, 64 questionnaires were filled and returned using the internet mode. In addition, the responses analysis was indicated in the table 4.1.

Table 4. 1 Response Rate

Status	Frequency	Percent
Returned	64	95.5
Unreturned	3	4.5
Total	67	100

From the table 4.1 shows that those questionnaires that were returned and used for data analysis were represented by 95.5%. The response rate was adequate for the research and this indicated that the analysis could be done using the above questionnaires.

4.3 Demographic Information

The demographic information of the respondents included the gender, position they held within the firm, duration of years they had worked for the firm and highest level of education qualification attained.

4.3.1 Gender of Respondents

The gender of the respondents was evaluated on the study of influence of ambidexterity approaches on project success within the aviation industry. The results were indicated in the table 4.2.

Table 4.2 Gender of Respondents

Gender	Frequency	Percent
Male	58	90.6
Female	6	9.4
Total	64	100

Table 4.2 indicates that the respondents were male at 90.6% and female were represented by 9.4%.

4.3.2 Position Held in the Organization

The position held by the respondents in the organization was assessed on the study of influence of ambidexterity approaches on project success within the aviation industry. In, addition, the positions were categorized as high-level management, lower-level management and general staff. The results were indicated in the table 4.3.

Table 4.3 Position Held in the Organization

	Frequency	Percent
High Level Management	3	4.7
Lower-Level Management	14	21.9
General Staff	47	73.4
Total	64	100.0

From the table 4.3 it can be deduced that those respondents who participated in the study on influence of ambidexterity approaches on project success within the aviation industry and were in high level management accounting for 4.7%. In addition, those who were in

lower-level management were represented by 21.9%. Moreover, those who general staff were represented by 73.4%. It was deduced that more of the participants were general staff.

4.3.3 Duration of Time Worked in the Institution

The study also sought to determine whether there was significance of duration of time the respondents had worked for the institution and participated on the study of influence of ambidexterity approaches on project success within the aviation industry. The results were presented on table 4.4.

Table 4.4 Duration of Time Worked in the Institution

	Frequency	Percent
0 - 4 Years	10	15.6
5 - 9 Years	24	37.5
10 - 14 Years	16	25.0
15 - 19 Years	11	17.2
20 and Above Years	3	4.7
Total	64	100.0

From the table 4.4, it can be deduced that those respondents who participated on the study of influence of ambidexterity approaches on project success within the aviation industry and had worked for the organization for less than 4 years accounting for 15.6%. In addition, those who had worked for the airport for a period ranging from 5 to 9 years with 37.5%. Moreover, those respondents who had worked for the firm between 10 to 14 years with 25.0%. Additionally, those respondents who had worked for the airport for a period of 15 to 19 years represented by 17.2%. Further, those who had worked for the organization for more than 20 years accounting for 4.7%. It was widely held that the respondents had worked for the organization for a period of more than 5 years.

4.3.4 Highest Education Qualification

The research sought to determine whether there was significance of highest education level of the respondents on the study of influence of ambidexterity approaches on project success within the aviation industry. The education level was from certificate to doctorate level. The results were presented on the table 4.5.

Table 4.5 Highest Education Qualification

	Frequency	Percent
Certificate	4	6.3
Diploma	18	28.1
Degree	27	42.2
Masters	12	18.8
Postgraduate	3	4.7
Total	64	100.0

From the table 4.5 it can be deduced that respondents who had certificate level of education accounted for 6.3%. In addition, those who indicate that they had diploma level of education accounted for 28.1%. Further, those respondents who participated on the study of influence of ambidexterity approaches on project success within the aviation industry and had degree level of education accounted for 42.4%. Also, those respondents who had master's level of education accounted for 18.8%. Finally, those respondents who had doctoral level of education were represented by 4.7%. It was widely held that respondents had degree level of education with 42.2%

4.4 Ambidexterity Approaches and Project Success

The research sought to determine influence of ambidexterity approaches on project success within the aviation industry. In addition, the following section captured the descriptive

statistics on the three approaches of ambidexterity that were sequential, structural and contextual ambidexterity.

4.4.1 Analysis of Sequential Ambidexterity and Project Success

The research sought to examine the influence of sequential ambidexterity on project success within the aviation industry. In addition, the responses were analyzed from the Likert scale: strongly disagree (SD), disagree (D), neutral (N), agree (A) and strongly agree (SA) and indicates as mean (μ) and standard deviation (SD). The results were indicated in the table 4.6.

Table 4.6 Sequential Ambidexterity

Statements	SD%	D%	N%	A%	SA%	μ	σ
Individual factors that is handling one project task at time influence project success	37.5	6.3	18.8	6.3	31.3	2.87	1.704
Switching firm's capabilities that is shifting between exploitation and exploration firm's resources influence project success	10.9	28.1	23.4	23.4	14.1	3.02	1.241
High knowledge transfers that is sharing knowledge through exploring or exploiting firm's resources influences project success	31.3	6.3	14.1	25	23.4	3.03	1.593
Technological resources that is "modifying a project's R&D activities to move between exploration and exploitation" of resources influence project success	15.6	28.1	6.3	14.1	35.9	3.27	1.566
Firm's unique capacities like human and financial resources influence project success	12.5	23.4	12.5	18.8	32.8	3.36	1.462
Project strategies used influence project success	15.6	0.00	42.2	15.6	26.6	3.37	1.315
Absorptive capacities that are abilities "of a firm to recognize new external	15.6	4.7	29.7	23.4	26.6	3.41	1.354

information”, assimilating and applying
to project’s objectives influence success

Table 4.6 depicts that individual factors which involves handling one project task at time influence project success where those respondents who strongly disagreed with 37.5%, disagreed with 6.3%, neutral with 18.8%, agreed with 6.3% and strongly agreed 31.3% had the minimum mean score of 2.87 and the standard deviation of 1.704 indicates that the constructs were close to the mean. In addition, switching firm’s capabilities that is shifting between exploitation and exploration firm’s resources influence project success where those respondents who strongly disagreed with 10.9%, disagreed with 28.1%, neutral with 23.4%, agreed with 23.4% and strongly agreed 14.1% had second least mean of 3.02 and a standard deviation of 1.241. Further, high knowledge transfers that is sharing knowledge through exploring or exploiting firm’s resources influences project success where those respondents who strongly disagreed with 31.3%, disagreed with 6.3%, neutral with 14.1%, agreed with 25.0% and strongly agreed 23.4% had the third least mean of 3.03 with a standard deviation of 1.593 which indicates that they were very close to the mean. Besides, technological resources that is “modifying a project’s R&D activities to move between exploration and exploitation” of resources influence project success where those respondents who strongly disagreed with 15.6%, disagreed with 28.1%, neutral with 6.3%, agreed with 14.1% and strongly agreed 35.9% had a moderate mean of 3.27 and a standard deviation of 1.566 shows that the constructs were very close to the mean.

Moreover, firm’s unique capacities like human and financial resources influence project success where those respondents who strongly disagreed with 12.5%, disagreed with 12.5%, neutral with 18.8%, agreed with 32.8% and strongly agreed 35.9% and average score 3.36 and a standard deviation of 1.462 indicating the responses were close to the

mean. In addition, the respondents indicated that project strategies used influence project success where those respondents who strongly disagreed with 15.6%, disagreed with 0.00%, neutral with 42.2%, agreed with 15.6% and strongly agreed 26.6% and a mean of 3.37 and a “standard deviation” of 1.462 shows that responses were spread to the mean. Finally, the respondents indicated that absorptive capacities which involves the abilities of a “firm to recognize new external information”, assimilating and applying to project’s objectives influence success where those respondents who strongly disagreed with 15.6%, disagreed with 4.7%, neutral with 29.7%, agreed with 23.4% and strongly agreed 26.6% and a mean score of 3.41 and standard deviation of 1.354 depicting that it was closely spread to the average responses.

The study findings were that use of high knowledge transfers or sharing knowledge when exploring or exploiting firm’s resources influences project success. In addition, individual factors determine how project tasks are handled at time influencing project success. Additionally, the switching firm’s capabilities involved shifting between exploitation and exploration firm’s resources influence project success. Moreover, project strategies used by the organization influence project success. Further, firm’s unique capacities involving human and financial resources influence project success. Besides, absorptive capacities involving abilities of a “firm to recognize new external information”, assimilating and applying to project’s objectives influence success. Finally, the study has found that technological resources comprising of “modifying a project’s R&D activities to move between exploration and exploitation” of resources influence project success

4.4.2 Analysis of Structural Ambidexterity and Project Success

The research sought examining influence of structural ambidexterity on project success within the aviation industry. In addition, the responses were analyzed from the Likert scale: strongly disagree (SD), disagree (D), neutral (N), agree (A) and strongly agree (SA) and indicates as mean (μ) and standard deviation (SD). The results were presented in the table 4.7.

Table 4.7 Structural Ambidexterity

Statements	SD%	D%	N%	A%	SA%	μ	σ
Organization structural separation through using various business units to explore and exploit resources influence project success	31.3	14.1	26.6	17.2	10.9	2.62	1.374
Structural differentiation by use of technology/innovation; job rotation; reorganization of capabilities influences project success	23.4	28.1	9.4	14.1	25	2.89	1.544
Separating project team by identifying project activities that are explorative, decentralizing decision making, encouraging entrepreneurial and flexible culture influence project success	6.3	12.5	25	18.8	37.5	3.11	1.605
Structural alignment that is exploring and exploiting of coordinated business units influence project success	21.9	15.6	17.2	17.2	28.1	3.14	1.531
Setting up new department to explore and exploit organization dynamic capabilities influence project success	20.3	0.0	17.2	26.6	35.9	3.58	1.489
Structural integration that manages exploring, and exploiting strategic measures like budgeting influence project success	25	15.6	14.1	14.1	31.3	3.69	1.271

It can be deduced from table 4.7 that analysis indicated that organization structural separation involving use of various business units to explore and exploit resources influence project success, where those respondents who strongly disagreed with 31.3%,

disagreed with 14.1%, neutral with 26.6%, agreed with 17.2% and strongly agreed with 10.9% and with an average score of 2.62 and the standard deviation of 1.374 showing that items were close to the average.

In addition, analysis indicated that structural differentiation which included technology/innovation; job rotation; reorganization of capabilities influences project success, where those respondents who strongly disagreed with 23.4%, disagreed with 28.1%, neutral with 9.4%, agreed with 14.1% and strongly agreed with 25.0%. In addition, with a mean of 2.89 and responses were close to the average with a standard deviation of 1.544.

Further, analysis indicated that separating project team that is project activities that were explorative, making decision decentralized, cultures that are more entrepreneurial and flexible influence project success, where those respondents who strongly disagreed with 6.3%, disagreed with 12.5%, neutral with 25.0%, agreed with 18.1% and strongly agreed with 37.5% and a mean of 3.11 and a standard deviation of 1.605 which indicates that” they were very close to the mean.

Besides, the analysis indicated that structural alignment involving exploring and exploiting of coordinated business units influence project success, where those respondents who strongly disagreed with 21.9%, disagreed with 15.6%, neutral with 17.2%, agreed with 17.2% and strongly agreed with 28.1% and a mean of 3.14 and a standard deviation of 1.531 showed that the constructs were very close to the mean.

Subsequently, analysis indicated that setting up new department explored, and exploited organization dynamic capabilities influence project success, where those respondents who strongly disagreed with 20.3%, disagreed with 0.0%, neutral with 17.2%, agreed with

26.6% and strongly agreed with 35.9% and average score of 3.58 and a standard deviation of 1.489 indicating the responses were close to the mean.

Finally, the analysis indicated that structural integration that manages exploring, and exploiting strategic measures like budgeting influence project success, where those respondents who strongly disagreed with 25.0%, disagreed with 15.6%, neutral with 14.1%, agreed with 14.1% and strongly agreed with 31.3% and had the “highest mean score of 3.69 and standard deviation” of 1.271 depicting that it was closely spread to the average responses.

The findings depicted that organization structural separation through using various business units for exploring and exploiting resources influenced project success. In addition, the study outcomes were that used of structural differentiation like technology/innovation; job rotation; reorganization of capabilities influenced project success. Further, the results showed that separating project teams by identifying project activities which were explorative, decentralizing decision making, encouraging entrepreneurial and flexible culture influenced project success. Moreover, employing structural alignment that explored and exploited coordinated business units influenced project success. Additionally, the research found that use of new departments in exploring and exploiting organization dynamic capabilities influenced project success. Lastly, the research findings indicated that structural integration which managed exploring, and exploiting strategic measures such as budgeting influenced project success.

4.4.3 Analysis of Contextual Ambidexterity and Project Success

The research sought to examine influence of contextual ambidexterity on project success within the aviation industry. In addition, the responses were analyzed from the Likert scale:

strongly disagree (SD), disagree (D), neutral (N), agree (A) and strongly agree (SA) and indicates as mean (μ) and standard deviation (SD). The results were presented in the table 4.8.

Table 4.8 Contextual Ambidexterity

Statements	SD%	D%	N%	A%	SA%	μ	σ
Creation of shared vision allowing employees to select whether to explore or exploit project tasks influencing project success	10.9	14.1	29.7	28.1	17.2	3.27	1.225
Process designing enhance flow of information and decisions, cutting across structures influencing project success	6.3	18.8	25	32.8	17.2	3.36	1.16
Job enrichment fosters knowledge acquisition, learning goal orientation and high achievement motivation influencing project success	15.6	23.4	0.0	23.4	37.5	3.44	1.562
Top management supports when making choice whether to individual exploit or explore project tasks influence project success	10.9	15.6	17.2	31.3	25	3.44	1.32
Designing cultural values on whether to individual exploit or explore project tasks influence project success	15.6	4.7	10.9	50	18.8	3.52	1.297
Employee's trust on whether to individual exploit or explore project tasks influence project success	4.7	21.9	20.3	12.5	40.6	3.63	1.339
Employee's discipline on whether to individual exploit or explore project tasks influence project success	0.0	9.4	18.8	23.4	48.4	4.11	1.025

From table 4.8 that analysis indicated that creation of shared vision allowing employees to select whether to explore or exploit project tasks influenced project success, where those respondents who strongly disagreed with 10.9%, disagreed with 14.1%, neutral with 29.7%, agreed with 28.1% and strongly agreed with 17.2% and a mean score of 3.27 and

the standard deviation of 1.225 showing that items were close to the average.

Further, those respondents who strongly disagreed with 6.3%, disagreed with 18.1%, neutral with 25%, agreed with 32.8% and strongly agreed with 17.2%. Also, with the lowest mean of 3.36 and standard deviation of 1.16 was recorded on whether process designing enhance flow of information and decisions, cutting across structures hence influencing project success.

Again, analysis indicated that job enrichment fosters knowledge acquisition, learning goal orientation and high achievement motivation influencing project success was the third lowest with “a mean of 3.44 and a standard deviation of 1.562 which indicates” that they were very close to the mean. Further, respondents who strongly disagreed with 15.6%, disagreed with 23.4%, neutral with 0.0%, agreed with 23.4% and those who strongly agreed with 37.5%.

Similarly, analysis indicated that top management supports when making choice whether to individual exploit or explore project tasks influence project success “had a mean of 3.44 and a standard deviation of 1.32” showed that the constructs were very close to the mean. In addition, respondents who strongly disagreed with 10.9%, disagreed with 15.6%, neutral with 17.2%, agreed with 31.2% and those who strongly agreed with 25.5%.

Moreover, analysis indicated that designing cultural values on whether to individual exploit or explore project tasks influence project success with second maximum average score of 3.52 and a standard deviation of 1.297 indicating the responses were close to the mean. In addition, respondents who strongly disagreed with 15.6%, disagreed with 4.7%, neutral with 10.9%, agreed with 50.0% and those who strongly agreed with 18.8%.

In addition, the analysis showed that employee’s trust on whether to individual exploit or

explore project tasks influence project success had second highest mean of 3.63 and standard deviation of 1.339 indicating higher influence. Those respondents who strongly disagreed with 4.7%, disagreed with 21.9%, neutral with 20.3%, agreed with 12.5% and those who strongly agreed with 40.6%.

Finally, the analysis indicated that employee's discipline on whether to individual exploit or explore project tasks influence project success with the "highest mean score of 4.11 and standard deviation" of 1.025 depicting that it had the highest influence. In addition, respondents who strongly disagreed with 0.0%, disagreed with 9.4%, neutral with 18.8%, agreed with 23.4% and those who strongly agreed with 48.4%.

Findings on contextual ambidexterity shows that employee's discipline on whether to individual exploit or explore project tasks had the highest influence on project success. Further, the results depicted that employee's trust on whether to individual exploit or explore project tasks was the second highest influencer on project success. Moreover, designing cultural values on whether to individual exploit or explore project tasks moderately influenced project success. Additionally, the research outcomes showed that top management supports when making choice whether to individual exploit or explore project tasks on average influenced project success. Also, the study outcomes indicated that job enrichment fosters knowledge acquisition, learning goal orientation and high achievement motivation with a low influence on project success. Again, the findings indicated that process designing enhanced flow of information and decisions, cutting across structures had a lower influence on project success. Finally, the study found that creation of shared vision allowing employees to select whether to explore or exploit project tasks had the lowest influence on project success.

4.4.4 Analysis of Ambidexterity Approaches and Project Success

The research sought to examine influence of ambidexterity approaches on project success within the aviation industry. In addition, the responses were analyzed from the Likert scale: strongly disagree (SD), disagree (D), neutral (N), agree (A) and strongly agree (SA) and indicates as mean (μ) and standard deviation (SD). The results were indicated in the table 4.9.

Table 4.9 Project Success

Statements	SD%	D%	N%	A%	SA %	μ	σ
Completing project on time influence project success	31.3	14.1	14.1	20.3	20.3	2.84	1.556
Quality project influence project success	25	25	0.0	21.9	28.1	3.03	1.623
Project cost influence project success	6.3	20.3	39.1	10.9	23.4	3.25	1.208
Firm innovativeness influence project success	4.7	0.0	20.3	51.6	23.4	3.89	0.928
Stakeholder's perception influence project success	0.0	3.1	35.9	57.8	3.1	4.48	0.713
Attaining project's goals and objectives indicates project success	0.0	1.6	6.3	23.4	68.8	4.59	0.684

Table 4.9 indicates that analysis completing project on time influenced project success lowest average score of 2.84 and the standard deviation of 1.556 showing that items were close to the average. In addition, analysis quality of project influenced project success had lower mean of 3.03 and responses were close to the average with a standard deviation of 1.623. In addition, respondents who strongly disagreed with 31.3%, disagreed with 14.1%, neutral with 14.1%, agreed with 20.3% and those who strongly agreed with 20.3%.

Further, analysis indicated that project cost influenced project success on average of 3.25

and a standard deviation of 1.208 which indicates that they were very close to the mean. In addition, respondents who strongly disagreed with 6.3%, disagreed with 20.3%, neutral with 39.1%, agreed with 10.9% and those who strongly agreed with 23.4%.

Additionally, analysis indicated that firm innovativeness influenced project success “with a high mean of 3.89 and a standard deviation” of 0.928 showed that the constructs were very close to the mean. In addition, respondents who strongly disagreed with 6.3%, disagreed with 20.3%, neutral with 39.1%, agreed with 10.9% and those who strongly agreed with 23.4%.

In addition, the analysis on whether stakeholder’s perception influenced project success had a higher average score of 4.48 and a standard deviation of 0.713 indicating the responses were close to the mean. In addition, respondents who strongly disagreed with 0.0%, disagreed with 3.1%, neutral with 35.9%, agreed with 57.8% and those who strongly agreed with 3.1%.

Finally, the analysis on whether attaining project’s goals and objectives indicates project success had the “highest mean score of 4.59 and standard deviation” of 0.680 depicting that it was closely spread to the average responses. In addition, respondents who strongly disagreed with 0.0%, disagreed with 1.6%, neutral with 6.3%, agreed with 23.4% and those who strongly agreed with 68.8%.

The findings of the study showed that attaining project’s goals and objectives indicates had the highest influence on project success. In addition, the research found that stakeholder’s perception had a higher influence on project success. Moreover, the study outcomes indicated that firm innovativeness on average influenced project success. Also, the results showed that project cost had a low influence on project success. Addition, the outcomes of

the research depict that quality project had a lower influence on project success. Finally, the study outcomes revealed that completing project on time had lowest influence on project success.

4.5 Autocorrelation Test

The analysis of regression model entailed determining autocorrelation. If observations are made over time, it is likely that successive observations are related. Table 4.10 shows the Durbin Watson test.

Table 4.10 Durbin Watson Test

Model	Durbin-Watson
1	2.472 ^a

Table 4.10 The Durbin-Watson statistic is 2.472 which is between 1.5 and 2.5 and therefore the study found there is no autocorrelation among the independent variables.

4.6 Test for Normality

The test for normality was determined using Kolmogorov-Smirnov and Shapiro-Wilk. The results were indicated in the table 4.11.

Table 4.11 Tests of Normality

Variables	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Sequential Ambidexterity	.163	64	.200	.908	64	.118
Structural Ambidexterity	.124	64	.066	.943	64	.105
Contextual Ambidexterity	.189	64	.154	.904	64	.120
Project Success	.193	64	.161	.904	64	.114

a. Lilliefors Significance Correction

Table 4.11 indicates that all the variables from the Kolmogorov-Smirnov Test and the Shapiro-Wilk Test the significances were greater than Alpha value of 0.05, hence the study data is normal.

4.7 Multicollinearity Test

Multicollinearity test was determined to identify whether the variables done to avoid habits in the decision-making process regarding the partial effect of independent variables on the dependent variable. The results were indicated in table 4.12.

Table 4.12 Collinearity Statistics

Variables	Tolerance	VIF
Sequential Ambidexterity	.207	4.834
Structural Ambidexterity	.126	7.938
Contextual Ambidexterity	.202	4.950

a. Dependent Variable: Project Success

Based on the coefficients output from table 4.12 on collinearity statistics, obtained Variance Inflation Factor (VIF) value of 4.834, 7.938 and 4.950 meant that the VIF value obtained were between 1 to 10 hence the study found there is no multicollinearity among the study variables.

4.8 Pearson Correlation of Ambidexterity Approaches and Project Success

The study sought to determine the correlation analysis of influence of ambidexterity approaches on project success within the aviation industry. The four variables were: project success, sequential, structural, and contextual ambidexterity.

The aim of the analyses was establishing the bivariant relationships among the variables. In addition, the Pearson correlation was determined for the four variables. The analyses were computed and shown in the table 4.13.

Table 4.13 Pearson Correlation of Ambidexterity Approaches and Project Success

		Success	Sequential	Structural	Contextual
Project Success	Pearson Correlation Sig. (2-tailed)	1			
Sequential Ambidexterity	Pearson Correlation Sig. (2-tailed)	.765**	1		
Structural Ambidexterity	Pearson Correlation Sig. (2-tailed)	.914**	.889**	1	
Contextual Ambidexterity	Pearson Correlation Sig. (2-tailed)	.821**	.815**	.892**	1

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

Table 4.13 showed that all the four variables had positive relationship with the project success in aviation industry. First, the Pearson correlation of sequential ambidexterity was 0.765 which shows that it was significant as the p – value was less than 0.01 that is 0.00 and thus it influenced project success in the aviation sector. The second variable of structural ambidexterity had also very strong positive Pearson correlation of 0.914 which was significant at the 0.01; hence it influences project success. Finally, contextual ambidexterity had a stronger positive Pearson correlation of 0.821 which was significant at the 0.01 that showing that it influenced project success.

4.6 Regression Analysis of Ambidexterity Approaches and Project Success

The study also sought to examine the linear relationship of the variables through regression analysis of Ambidexterity Approaches and Project Success in the aviation industry in

Kenya. The dependent variable was project success, while the independent variables were sequential ambidexterity, structural ambidexterity, and contextual ambidexterity. In addition, table 4.14 presents the summaries of the regression model.

Table 4.14 Regression Analysis Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.920 ^a	.846	.839	.29051

a. Predictors: (Constant), Contextual Ambidexterity, Sequential Ambidexterity, Structural Ambidexterity

From the table 4.14, the study found out the multiple correlation coefficient R was 0.920 indicating very strong relationship between influence of ambidexterity approaches and project success within the aviation industry. The R Square was 0.846 indicating the independent variables in this study namely, Contextual Ambidexterity, Sequential Ambidexterity and Structural Ambidexterity; jointly explain 84.6 per cent of the variation in the dependent variable namely project success, within the aviation industry. Further, analysis of variance (ANOVA) shown in table 4.15, depicts the computed data indicated the population parameters had statistical significance at level of 0.000 ($p < 0.05$) “which showed the data was ideal for making” conclusions “on the population parameters as the value of significance (p-value) was less than” five percent. The F-statistic of 110.0558 showed the overall significance of the plane; its p-value ($p < 0.05$) showed that the model was statistically significant to explain the influence of ambidexterity approaches on project success within the aviation sector.

Table 4.15 Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.865	3	9.288	110.06	.000 ^b
	Residual	5.064	60	.084		
	Total	32.929	63			

a. Dependent Variable: Project Success

b. Predictors: (Constant), Contextual Ambidexterity, Sequential Ambidexterity, Structural Ambidexterity

Table 4.16 depicts the coefficients of all independent variables. It revealed when the three variables sequential ambidexterity, structural ambidexterity and contextual ambidexterity were at a constant of 1.892. The finding indicates that ambidexterity approaches on influenced project success in aviation industry.

Table 4.16 Regression Model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.892	.151		12.49	.000
Sequential Ambidexterity	-.149	.071	-.23	-2.09	.001
Structural Ambidexterity	.670	.089	1.07	7.53	.000
Contextual Ambidexterity	.040	.086	.052	.46	.000

a. Dependent Variable: Project Success

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + E \text{ Where: } \beta_0 = 1.892, \beta_1 = -0.149, \beta_2 = 0.670 \text{ and } \beta_3 = 0.040$$

$$\text{Hence, } Y = 1.892 - 0.149X_1 + 0.67X_2 + 0.04X_3$$

4.6.1 Testing of Hypotheses

From table 4.16, the first null hypothesis was Sequential ambidexterity has no statistically significant influence on project success was rejected and the alternative hypothesis

accepted since Sequential ambidexterity has statistically significant influence on project success. This is because the (p-value = 0.000) was less than alpha of 0.005 in this study.

In addition, the second null hypothesis which was structural ambidexterity has no statistically significant effect on project success was rejected and the alternative hypothesis accepted since Structural ambidexterity has statistically significant effect on project success. This is because the also (p-value = 0.001) was less than alpha of 0.005 in this study.

Finally, the third null hypothesis stated Contextual ambidexterity has no statistically significant effect on project success was rejected and the alternative hypothesis accepted since Contextual ambidexterity has a statistically significant effect on project success since the p-value = 0.000 was less than the alpha of 0.005 in this study.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter presented the discussion, recommendations, and conclusions about influence of ambidexterity approaches on project success within the aviation industry in Kenya. In addition, the chapter elucidate on the areas for further research.

5.2 Discussions

The research evaluated three hypotheses about influence of ambidexterity approaches on project success within the aviation industry in Kenya as discussed below.

5.2.1 Sequential ambidexterity influence on project success within the aviation industry in Kenya

On sequential ambidexterity the research found that individual factors determine how project tasks are handled at time influencing project success. Similarly, the findings of Visser, Faems et al. (2017) on research about “sequential ambidexterity in practice which was longitudinal study on shifts from exploration to exploitation and reverse” are in unison with the research outcomes. Which found that individual factors interacted together impacting the shifts from exploring to exploiting hence, achieve project success.

Moreover, the research analysis revealed that switching firm’s capabilities involved shifting between exploitation and exploration firm’s resources influence project success. The findings concur with the study of Chou et al. (2017) research on temporally switching capabilities to well understanding of the process through which sequential ambidexterity is achieved. Where the findings were that the temporally switching capabilities relates positively to new product performance. Similarly, the findings agree Chou et al. (2017)

that project strategies used by the organization influence project success. The study therefore failed to accept the null hypothesis number **H0₁** namely there is no significant relationship between sequential ambidexterity and project success. The study accepted the alternate hypotheses namely there is significant relationship between sequential ambidexterity and project success.

5.2.2 Structural ambidexterity influence on project success within the aviation industry in Kenya

Also, the findings organization structural separation through using various business units for exploring and exploiting resources influenced project success. In addition, this concur with the study of García et al. (2018) on “high performance work system and performance: opening the black box by the organizational/firm ambidexterity and human resource flexibilities.” The study findings showed that structural ambidexterity puts enormous job demands on top managers.

Further, the study outcomes were that used of structural differentiation like technology/innovation; job rotation; reorganization of capabilities influenced project success. The findings echoed those of Hansen et al. (2018) conducted a study on structural ambidexterity investigating “transition processes”, and to understanding “how managers dynamically configured, and reconfigured” exploring–exploiting interface over time. The study found that legitimacy early seeking compared to “frustration at discontinuation of innovation; spanning boundary by job rotation” compared to moving on with “old culture”; early compared to “premature transfer; reorganization” compared to capabilities mutation; and improved access of core firm resources compared to “resource starvation”.

Moreover, the research has found that employing structural alignment that explored and exploited coordinated business units influenced project success. The findings agree with

the study of Heracleous et al. (2017) on organizational dysfunctions interfering with implementing “of structural ambidexterity as dynamic” capabilities. Which found that inventions of explorative units were “treated as external in the focal” firm, “mirroring the” environmental “dynamics of portfolio resources with the context of strategic alliances.”. The study therefore failed to accept the null hypothesis number **H0₂** namely there is no significant relationship between Structural ambidexterity and project success. The study therefore accepted the alternate hypotheses namely there is significant relationship between Structural ambidexterity and project success

5.2.3 Contextual ambidexterity effect on project success within the aviation industry in Kenya

Findings on contextual ambidexterity shows that employee’s discipline on whether to individual exploit or explore project tasks had the highest influence on project success. Further, the results depicted that employee’s trust on whether to individual exploit or explore project tasks was the second highest influencer on project success. Moreover, designing cultural values on whether to individual exploit or explore project tasks moderately influenced project success.

Additionally, the research outcomes showed that top management supports when making choice whether to individual exploit or explore project tasks on average influenced project success. These findings agree with the study of Ossenbrink et al. (2018) on “how the environment shapes a firm’s use of structural and contextual ambidexterity”, which is longitudinal “case study” from four largest electric utility firms in Germany.” The study found that “ambidexterity techniques are influenced by top level managers’ perceptions of capabilities, and opportunities”.

Also, the study outcomes indicated that job enrichment fosters knowledge acquisition, learning goal orientation and high achievement motivation with a low influence on project success. Again, the findings indicated that process designing enhanced flow of information and decisions, cutting across structures had a lower influence on project success. Finally, the study found that creation of shared vision allowing employees to select whether to explore or exploit project tasks had the lowest influence on project success. The findings concur with study of Herhausen (2016) on “ambidextrous effects/influence of its proactive and responsive dimension offering a fresh perspective on market orientation”. The study findings from time lagged performance data, and polynomial regression showed that the balance between, proactive, and responsive market orientation had incremental positive influence on performance. The study therefore failed to accept hypothesis number **H03** namely there is no significant relationship between Contextual ambidexterity and project success. The study accepted the alternate hypothesis namely there is significant relationship between Contextual ambidexterity and project success.

5.3 Summary of Main Findings

On sequential ambidexterity it can be summarized that use of high knowledge transfers or sharing knowledge when exploring or exploiting firm’s resources influences project success. In addition, individual factors determine how project tasks are handled at time influencing project success. Additionally, the switching firm’s capabilities involved shifting between exploitation and exploration firm’s resources influence project success. Moreover, project strategies used by the organization influence project success. Further, firm’s unique capacities involving human and financial resources influence project success. Besides, it can be summarized that absorptive capacities involving abilities “of a

firm to recognize new external information”, assimilating and applying to project’s objectives influence success. Finally, the study has found that technological resources comprising of “modifying a project’s R&D activities to move between exploration and exploitation” of resources influence project success. The findings are consistent with assumptions of dynamic capability theory, resource-based theory and organizational theory discussed in chapter 1 section 1.13 under theoretical framework.

On structural ambidexterity it can be summarized that organization structural separation through using various business units for exploring and exploiting resources influenced project success. More summaries were that used of structural differentiation like technology/innovation; job rotation; reorganization of capabilities influenced project success. Further, it can be summarized that separating project teams by identifying project activities which were explorative, decentralizing decision making, encouraging entrepreneurial and flexible culture influenced project success. Moreover, it can be summarized that employing structural alignment that explored and exploited coordinated business units influenced project success. Additionally, it can be summarized that use of new departments in exploring and exploiting organization dynamic capabilities influenced project success.

It can be summarized on contextual ambidexterity employee’s discipline on whether to individual exploit or explore project tasks had the highest influence on project success. Further, employee’s trust on whether to individual exploit or explore project tasks was the second highest influencer on project success. Moreover, designing cultural values on whether to individual exploit or explore project tasks moderately influenced project success. Additionally, that top management supports when making choice whether to

individual exploit or explore project tasks on average influenced project success. Also, the job enrichment fosters knowledge acquisition, learning goal orientation and high achievement motivation with a low influence on project success. Finally, it can be summarized that creation of shared vision allowing employees to select whether to explore or exploit project tasks had the lowest influence on project success.

5.4 Conclusions

This study was able to achieve its objectives as follows. It can be concluded that sequential ambidexterity had very strong positive significant influence project success in the aviation sector. Moreover, high knowledge transfers, individual factors, switching firm's capabilities, project strategies, firm's unique capacities, absorptive capacities and technological resources influence project success in aviation industry.

It can also, be concluded that structural ambidexterity had also very strong positive significant influence hence it influences project success. In addition, organization structural separation, structural differentiation, structural integration, structural alignment, setting up new department and separating project team influence project success.

Finally, it can be concluded that contextual ambidexterity had a stronger positive significance showing it influenced project success. Also, Creation of shared vision, process designing, job enrichment, top management supports, designing cultural values, employee's discipline and employee's trust influence project success.

5.5 Recommendations

From the following study on influence of ambidexterity approaches on project success within the aviation industry in Kenya: First, on sequential ambidexterity the research

recommends that management should create an environment with high knowledge transfers so as to encourage exploring or exploiting firm's resources. Also, the management should create an environment that allow individual to use their attributes or factors when exploring or exploiting. Further, the management should enable employees to use switching firm's capabilities and unique capacities to allow exploitation and exploration firm's resources.

Secondly, on structural ambidexterity the research recommends that organization structural to use various business units in exploring and exploiting resources. Further, the firm should use more of structural differentiation like technology/innovation; job rotation; reorganization of capabilities.

Finally, on contextual ambidexterity the study recommends that the organization should encourage creation of shared vision, ensure that is flow of information, enhance job enrichment in order to attain project success. Secondly, top management should support the employees who are either embracing exploit and explore in order to achieve project success. Also, the organization should ensure that there is the right culture, employee discipline and trust in order to enhance exploitation and exploration.

5.6 Areas of Further Research

The research was about influence of ambidexterity approaches on project success within the aviation industry in Kenya. Further, studies can explore dimensions of ambidexterity such as balanced dimensions of ambidexterity and combined dimensions of ambidexterity in the aviation sector and other industries.

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APPENDICES

Appendix 1: Questionnaire

This is a questionnaire is for collecting data for my master degree in Africa Nazarene University. The research title is “Influence Of Ambidexterity On Project Success Within The Aviation Industry In Kenya. A Case Study Of Wajir International Airport Rehabilitation Projects.” Fill in the spaces indicated.

Part A: Demographic

1. Gender? a) Male [] b) Female []

2. Position held in the organization?

.....

3. Number of years you worked in the organization?

.....

4. Highest level of education

a) Certificate [] b) Diploma [] c) Degree [] d) Masters [] e) Postgraduate []

Part B: Sequential Ambidexterity

5. On a scale of 1 -5 where 5) Strong Agree 4) Agree 3) Neutral, 2) Disagree and 1) Strongly Disagree, rate the following statements regarding sequential ambidexterity.

	1	2	3	4	5
High knowledge transfers that sharing knowledge through exploring or exploiting firm’s resources influences project success					
Individual factors that is to handle one project task at time influence project success					
Switching firm’s capabilities that is shifting between exploitation and exploration firm’s resources influence project success					
Project strategies used influence project success					
Firm’s unique capacities like human and financial resources influence project success					

Absorptive capacities that are abilities of a firm to recognize new external information, assimilating and applying to project's objectives influence success					
Technological resources that is modifying a project's R&D activities to move between exploration and exploitation of resources influence project success					

Part C: Structural Ambidexterity

6. On a scale of 1 -5 where 5) Strong Agree 4) Agree 3) Neutral, 2) Disagree and 1) Strongly Disagree, rate the following statements regarding structural ambidexterity.

	1	2	3	4	5
Organization structural separation that is using various business units to explore and exploit resources influence project success					
Structural differentiation that is technology/innovation; job rotation; reorganization of capabilities influences project success					
Structural integration that is managing exploring, and exploiting strategic measures like budgeting influence project success					
Structural alignment that is exploring and exploiting managers coordinating business units influence project success					
Setting up new department which explore and exploit organization dynamic capabilities influence project success					
Separating project team that is project activities that are explorative making decision decentralized with cultures that are more entrepreneurial and flexible influence project success					

Part D: Contextual Ambidexterity

7. On a scale of 1 -5 where 5) Strong Agree 4) Agree 3) Neutral, 2) Disagree and 1) Strongly Disagree, rate the following statements regarding contextual ambidexterity.

	1	2	3	4	5
Creation of shared vision that allowing employees to select whether to explore or exploit project tasks influence project success					

Process designing that flow of information and decisions, cutting across structures influence project success					
Job enrichment that is knowledge acquisition, learning goal orientation and high achievement motivation influence project success					
Top management supports when making choice whether to individual exploit or explore project tasks influence project success					
Designing cultural values on whether to individual exploit or explore project tasks influence project success					
Employee's discipline on whether to individual exploit or explore project tasks influence project success					
Employee's trust on whether to individual exploit or explore project tasks influence project success					

Part E: Ambidexterity and Project Success

8. On a scale of 1 -5 where 5) Strong Agree 4) Agree 3) Neutral, 2) Disagree and 1) Strongly

Disagree, rate the following statements regarding ambidexterity and project success.

	1	2	3	4	5
Completing project on time influence project success					
Quality project influence project success					
Project cost influence project success					
Stakeholder's perception influence project success					
Firm innovativeness influence project success					
Attaining project's goals and objectives indicates project success					

.....**Thank you**.....

Appendix 3: Research Approvals and Letters



2nd, September, 2020

E-mail: researchwriting.mba.anu@gmail.com

Tel. 0202711213

Our Ref: 17S03DMBA002

The Director,
National Commission for Science,
Technology and Innovation (NACOSTI),
P. O. Box 30623, 00100
Nairobi, Kenya

Dear Sir/Madam:

RE: RESEARCH AUTHORIZATION FOR: OBADIAH KOMEN

Mr. Obadiah is a postgraduate student of Africa Nazarene University in the Master of Business Administration (MBA) program. In order to complete his program, Mr. Obadiah conducting a research entitled: "Influence of Ambidexterity Approaches on Project Success within the Aviation Industry in Kenya. A Case Study of Wajir International Airport Rehabilitation Projects"

Any assistance offered to him will be highly appreciated.

Yours Faithfully,

Kagwathi Githii,
Chair, School of Business,
Africa Nazarene University.

Appendix 4: Map of Study Area

