

# Cloud Computing and Digital Call Center on Corporate Performance of Airline Industry in Kenya

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**Abstract:** Digitalization has brought diverse challenges and opportunities for the airline industry. The aim of this study is to examine the effect of cloud computing and digital call center on the corporate performance in the airline industry in Kenya. Specifically, the study seeks; to examine the influence of digital call center on the performance of the airline industry in Kenya; to assess the effect of cloud computing on the corporate performance of the airline industry in Kenya. The study adopted a descriptive research design and applied case study in data collection. The study population was Kenya Airways 3300 staff while the unit of analysis was Kenya Airways staff in Nairobi office. A sample of 100 employees was randomly selected for the study. The study relied on quantitative data collected through a questionnaire structured to meet the objectives of the study. The quantitative data was analysed using descriptive and inferential statistical methods. The study results indicated a correlations value of  $R=0.577$  exists, which indicates that there is a positive association between digital call center and cloud computing on corporate performance. The coefficient of determination  $R\text{-Square } R^2=0.332$  which implies that digital call center and cloud computing explains 33.2% of the variance in corporate performance in airline industry in Kenya. Study concludes that digital call center agents are a valuable team to the airline industry. Therefore, digital call center has had a positive impact on service delivery in Kenya Airways and generally in the airline industry. Secondly, customers expect airlines to use technology such as cloud computing for ease of service delivery and that the use of cloud computing technologies keep employees connected and enhance the rate of work flow and also that work is done efficiently and effectively as a result of cloud computing technologies. The study recommends that Airlines should increase adoption of cloud computing for ease of service delivery and that the use of cloud computing technologies keep employees connected and enhance the rate of work flow and also that work is done efficiently and effectively as a result of cloud computing technologies. In relation to the digital call centre, it is important that the airline industry invests in state of the art call centers that bring on board social media, and other interactive platforms to ensure services are offered to customers efficiently and effectively. The study proposes continued adoption and use of digital transformational technologies by airline industry in Kenya to achieve competitive advantages and sustainability.

**Keywords:** Cloud Computing, Digital Call Center, Corporate Performance

## I. INTRODUCTION

According to (Sanja, Dušica and Nikola 2019) the rapid development and penetration of digital technologies in all segments of society has led many businesses to think and actively explore the methods by which digital technologies can

be exploited productively to raise the quality of all aspects of business. The concept of digital transformation is emerging not as one of the possible solutions, but as a prerequisite for companies striving for business excellence and expansion. Digital technology is central for designing a new and more competitive business model. However, digital technology alone is not enough to help an enterprise improve its market position and business performance. It requires constant, adequately guided and directed integral use of modern digital technologies in the activities of changing products, processes, organizational structure, organizational culture, in the business model as a whole, focusing on the optimal satisfaction of the consumer needs. These characteristics form the basic idea of the concept of digital transformation (Sanja et al., 2019).

One of the most attractive goals for the contemporary firms is digitalization described as any change in the organization and its business model due to the increasing use of electronics and telecommunication technologies (Verina and Titko, 2019). Digitalization is supported by new information and communication technologies (ICTs) (Kobus et al., 2018) embracing systems such as virtualization mobility and analytical systems (Loonam et al., 2018), promising to revolutionize the way business is conducted within industrial value chains through the use of Internet of things (IoT), artificial intelligence (AI) technology, big data analytics, cloud computing, intensive data exchange and predictive analytics (Rachinger et al., 2019). Using digital technologies provides new business opportunities, supporting value-producing opportunities, revenue growth and operating efficiency (Gimpel and Schmied, 2019). The mentioned opportunities motivate many firms to experiment with innovative business models based on digital technology (Baines et al., 2017), even if, despite the often-substantial investments companies have made in digital initiatives, few were able to experience the expected growth (Destemet et al., 2015).

A digital call center is a customer service operation that provides support for its customers through digital channels such as email, chat, text (SMS), social media, and more. Support of these channels is usually in addition to traditional phone support (Deloitte Digital, 2015). Far from forcing the contact centre onto its death bed, digital channels are actually giving contact centres a new lease of life. The digital call center is supported by many technologies designed to enhance the customer experience, improve the operating and management

efficiency, or lower the overall costs of running a contact center (Deloitte Digital, 2015). These technologies are: automatic call distributor systems, email response management systems, intelligent call routing, interactive voice response systems, knowledge management systems, toll-free telephone services, trunk circuit networks, web chat and workforce management systems. According to (Deloitte digital 2015), the role of digital call center is to deliver the digital experience through assisted channels such as webchat and online co-browsing, act as the lynchpin for an increasingly omni-channel experience and making sure customers don't fall through the gaps between those channels and provide the intimate expert, personal service that has been lost as organisations have moved away from local face to face interactions.

The cloud is an Internet-based computing technology that allows an infinite number of servers to act as a single entity thus a distributed computing system. The cloud computing offers five (5) service models namely: Infrastructure as a Service (IaaS) where the cloud service provider provides a set of virtualized computing resources like CPU, Memory, OS, and Application Software in the cloud; Platform as a Service (PaaS) where the cloud service provider offers, runs and maintains both system software (the operating system) and other computing resources. PaaS services include design, development and hosting of applications; Software as a Service (SaaS) where cloud service providers are responsible for running and maintaining application software, operating system and other resources. SaaS model appears to the customer as a web-based application interface where internet is used to deliver services that are accessed using a web-browser; Recovery as a Service (RaaS) solutions helps companies to replace their backup, archiving, disaster recovery and business continuity solutions in a single, integrated platform. RaaS providers help companies recover entire data centers, servers (OS, applications, configuration and data), and database files; Unified communications-as-a-service (UCaaS) is trending up amid the current (covid-19) crisis as this service model presents communications continuity and remote collaboration services to users, worldwide, via the cloud network. UCaaS platform not only empowers the mobile workforce to connect and collaborate over phone/video calls but also enables them to share files, documents or resources via the cloud infrastructure for streamlined workflows (Yuliya, 2020; Mwikya&Obura, 2021).

According to (Mourya and Gupta 2015) Corporate performance refers to the measurement adopted by an organization to ascertain how well the management has utilized the resources in the organization to deliver on set organizational objectives within a given period. In Africa, the performance of the aviation industry is still lagging behind those of the rest of the world. A report by IATA (2018) indicated that Africa has the weakest airline region in the world over the past four years. According to IATA predictions, African carriers are expected to report a \$300 million net loss in 2019 (slightly improved from the \$400 million net loss in 2018). The cost of operation in African Airlines is high due to the high taxes imposed by the

African governments and costly monopoly airlines dominating the aviation industry in Africa. Former top airlines in Africa, such as Kenya Airways and South African Airways (SAA), continue to struggle (IATA, 2018).

The airline industry is a resource intensive business and therefore return on invested is expected to be high to the business owners, shareholders and for prosperity of country as it is used to fly in and out local, visitors and tourists. The same applies to Kenya airways. Due to Covid 19 pandemic the airline industry has seriously been affected and Kenya airway hasn't been spared either. A Kenya airway has seen its profits tumble downwards with losses. The Airline recorded a 55.5% reduction in passenger numbers to hit a low of 1.1 million passengers during the period compared to 2.4 million passengers over the same period last year. Passenger revenue declined by 53% to Kshs. 20,230 million (KQ Press, 2020). As part of its strategic plan and turnaround strategy the Kenya airways management has been investing on digital transformation of the airline management functions and processes in order to improve the organisation effectiveness and efficiencies by enhancing customer booking, customer experience and engagement, streamlining operations, cargo handling and logistics, reduced human resource and creating new business models use of through digital technologies such as e-commerce, procurement systems, social media applications, customer relation management systems, big data technologies and enterprise resource planning system. Even though Kenya airways has invested in the digitalization of its functions and processes, the airline still faces challenges, and it hasn't reached the level of profitable performance as expected. The general objective of the study is to assess the effect of digital call center and cloud computing on the corporate performance in the airline industry in Kenya: a case study of Kenya Airways.

### 1.1 Research Study Questions

- i. What is the effect of digital call center on the performance of the airline industry in Kenya?
- ii. What is the effect of cloud computing on the corporate performance of the airline industry in Kenya?

## II. LITERATURE REVIEW

### 2.1 Diffusion of Innovation Theory (DOI)

(E. M Rogers , 1995) proposed the Diffusion of Innovation theory, which is critical in explaining the necessity for enterprises to embrace technologies and the flow of technology innovation in the social system. It primarily encompasses three points of view: diffusion is the systematic transfer of information through various digital channels within an organization; adoption is the decision-making process that determines the best course of action to take in order to achieve the best results; and innovation is an idea that could improve firm competencies. According to the theory, innovation is defined as a new concept aimed at changing the way a company's operations are carried out.

A specific type of innovation flows and spreads within the social system through the diffusion process (Rogers, 2003). The diffusion of innovation theory identifies additional factors that influence the successful dissemination of technological advancements. These characteristics include observability, trialability, complexity, amount to which a new notion or idea is deemed to be more extraordinary than the previous one is referred to as relative advantage (Dodgson & Salter, 2005). Compatibility is a characteristic that demonstrates how well a given invention aligns with the firm's ideals. The degree to which a certain type of innovation is thought to be too difficult to comprehend and apply is referred to as complexity. The amount to which an idea may be attempted, or rather, experimented on a bounded scale, is known as trialability. Finally, observability refers to how visible and perceptible innovation outcomes and side effects are to others (Rogers, 2003).

### *2.2 Stakeholder Theory*

The Stakeholder Theory was embedded in the management discipline in 1970 and gradually developed by Freeman in 1984. More recent scholarly works on the topic of stakeholder theory that exemplify research and theorizing in this area include Donaldson and Preston (1995), (Friedman and Miles 2002). Stakeholders' theory supports the concept of organizational performance (Hubbard, 2009). According to Hubbard (2009), stakeholder theory assesses organizational performance against the expectations of a variety of stakeholders' groups that have interests in the effects of the organization's activities.

Organizational performance is an indication of how well the organization has served various stakeholders (Freeman & Ehrhardt, 2012). Stakeholder theory has revolutionized performance measurement from the conventional economic prosperity measures of return on assets (ROA), return on equity (ROE), sales growth to non-financial measures which include environmental integrity and social equity (Hubbard, 2009). The interconnected network of stakeholders affects the procedure for making decisions in the organization, its effectiveness and performance. This theory is relevant to the study as it measures the performance of the organization through addressing non-financial and financial such as customer and employee satisfaction and profitability aspects of the organization.

### *2.3 Digital Call Center and Corporate Performance*

Study conducted on Australian tour agencies, the findings show that tourist attraction information, fare information, and tour package information are the top three uses of the internet (Huawei 2020). This study further shows that travel agencies that have embraced the use of the internet emphasize on travel information such as package prices among other travel related information so as to assist the consumers to make decisions. The current study will be on influence of digital call center on corporate performance of airline industry in Kenya.

According to (MuthokaSeraphine2017) on the study factors affecting call center performance in the banking industry in Kenya investigated how outsourcing affect call center performance in the banking industry, what role do call centers play in customer satisfaction in the banking industry and how does technology impact performance of call centers in the banking industry. This study used descriptive research design. The population of the study was formed from two banks, namely Sidian Bank, and Chase Bank whose total population was 680. The sample frame for the study was a list of management staff, and employees from each of the banks. This study applied stratified sampling followed by simple random sampling technique. The sample size was 340.

According to (Wahu and Kagiri 2017), on the study Influence of Information Communication and Technology Strategies on Organization Performance in the Airline Industry posits that a firm's sustainability is highly dependent on its strategies to improve and advance operations. Corporate success in today's market environment is defined by some factors which are out of the direct control of an organization, yet organizations have to adapt to the external environments dynamic ways for their survival. There are ICT networks to deliver a wide range of value added products and services to customers in the airline industry. The airline business depends on the wellbeing of international trade and the stability of the markets. The study seeks to determine the influence of computerized reservation systems, internet applications, communication networks and systems integration on the organizational performance of Kenya Airways Limited.

The study concluded that all the four independent variables influence performance of the organization. Computerized reservation systems, internet applications, communication networks and systems integration positively influence the performance of Kenya Airways. Despite the fact that the profitability of Kenya Airways has gone down over the years, systems of the operations have improved overtime and approved internally. Conceptually (Wahu and Kagiri 2017) study looked at legacy ICT system at KQ, the current study examined upto-date digitalization technologies applied and applicable in airline industry turn round strategy post COVID-19 period.

### *2.4 Cloud Computing and Corporate Performance*

According to (Hosseini, Amir, and Seyedeh 2021), using cloud computing develops, one of the problems that managers face at the organization level is that the personnel cannot work with these systems, users do not accept these new systems and the problem of accepting these technologies, effective factors in accepting them and the existing barriers in accepting them by users are very important. In many organizations wherein cloud computing has been launched, a time period is required to accept this new system by their personnel. If this time period is less and the personnel can work with these systems earlier, the productivity increases in the organization. The paper analysed the effective factors on acceptance of cloud computing by personnel working in Birjand International Airport in South

Khorasan County (Iran) based on Roger's diffusion of innovation theory. The research was done by descriptive survey method and its community includes personnel working in different official and informatics departments of Birjand International Airport. The data gathering instrument was questionnaire and for determining questionnaire validity opinions of masters and for determining consistency Cronbach's alpha was used.

Computing tasks are assigned to a combination of remote connections, software and services on demand. End-users no longer need expertise in, or control of the technology infrastructure "in the cloud," and this is why there's renewed optimism in the clouds over Africa and in the developing world. Cloud computing offers several advantages such as flexibility and scalability, enhanced server uptime, promote group collaboration, competitive edge and cost effectiveness. Businesses can benefit from cloud services by improving efficiency and reducing costs. Based on their priorities different companies can adopt various cloud services, business processes and areas of expertise (Mwikya & Obura, 2021). This study surveyed the influence of cloud computing on the corporate performance of airline industry in Kenya.

### III. RESEARCH DESIGN AND METHODOLOGY

#### 3.1 Research Design

According to (Cooper and Schindler 2013), a research design is a blueprint that entails the collection, measurement, and analysis of data for a particular project. This study adopted descriptive research design which entails obtaining data that can be used to determine specific characteristics of a group (Kothari & Garg, 2014). Specifically, this research design entailed gathering of data, after which the data was organized, tabulated, and described.

Through the descriptive research design, the study seeks to investigate the impact of digitalization on corporate performance at Kenya Airways being the research base. This approach was appropriate because it aims to describe the relationship of the variables that are central to the conceptual framework. The descriptive research design was preferred because it also helps to answer question such as: the who, what, when, where, and how of a topic (Cooper & Schindler, 2013). The research involved the use of questionnaires for data collection from the sample selected. It was formally structured with clearly and well stated investigative questions that sought to find out pertinent issues related to the study.

#### 3.2 Target Population

Population is an entire group of individuals, objects or events with similar observable characteristics (Mugenda & Mugenda, 2013). Inferences for a study are enabled through the study data for a collection of units referred to as the target population (Kothari, 2007). Therefore, the study units which would enable making of research inferences are entailed in a target population (Cooper & Schindler, 2006). The target population of the study was Kenya Airways staff based in Nairobi as shown in Table 1. The study unit of analysis was

3300 staff of Kenya Airways head office in Nairobi. This unit of analysis was ideal for the research imperatively because the target population was more than three quarters on the entire work force of Kenya airways and based in KQ Headquarters in Nairobi where we have largest customer base and where all decisions concerning the airline are made. Thus, the response was equally representative of the organisation and adequate inference can be deduced.

#### 3.3 Sample and Sampling Procedure

(Ngechu 2004) underscores the importance of selecting a representative sample through making a sampling frame. From the population frame the required number of subjects, respondents, elements or firms was selected in order to make a sample. Simple random sampling technique was used to select the respondents from the sample. According to (Cooper and Schindler 2003), simple random sampling frequently minimizes the sampling error in the population. This in turn increases the precision of any estimation methods used. The sample size was determined using the formula by Cochran and Snedecor (1989) and the sample size determined as:

$$n = N / (1 + Ne^2) = 3300 / (1 + 3300(0.1)^2) = 98 \text{ respondents}$$

Where: n = sample size, N = is the population size and, e = is the level of precision which

is 10%; at 95% confidence level and p is assumed to be = .5

To arrive at a representative sample per group the following formula was used:

*Total population per group / Total population \* Total sample size.*

For example: Operations =  $1829 / 3300 * 98 = 54.32$

Table 1: Target Population and Sample Size

Department	Number of Staff	Sample Size
Cargo	165	5
Commercial	168	5
Corporate Communications & Public Affairs	6	1
Finance	129	4
Human Resources	49	2
Information Technology	60	2
Managing Director's Office	81	3
Operations	1829	53
Safety	8	1
Sales-Passenger Services	193	6
Technical	450	14
Security	162	4
<b>Grand Total</b>	<b>3300</b>	<b>100</b>

#### 3.4 Research Instrument

Data collection methods are defined as the process through which a researcher collects data that answers research objectives and questions of a study (Cooper & Schindler,

2014). The study adopted case study research design where the primary data was from the selected sample respondents using closed ended questionnaires.

### 3.5 Pilot Study

According to (Cooper and Schindler 2003), a pilot test is conducted to detect weaknesses in design and instrumentation and to provide proxy data for selection of a probability sample. This pilot study enabled the researcher to determine the reliability and validity of the instrument. (Connelly 2008) stated that a good study sample for a pilot study should be at least 10% of the projected sample. Therefore, this study conducted a pilot study using 10% of the sample size. The subjects included in the pilot study were not included in the final study. Pilot study helps to identify the questions that may not be understood by the respondent and if they are not rectified they may lead respondents to give unexpected response on the same.

#### 3.5.1 Validity

In general, validity is an indication of how sound your research is. More specifically, validity applies to both the design and the methods of your research. Validity in data collection means that your findings truly represent the phenomenon you are claiming to measure. To ensure validity, the researcher ensured that the same questions were posed to all participants during data collection and interviews. Time was also be allocated equally to all the participants. No mental or physical harm was caused to any participant (Kothari, 2004). The supervisors reviewed the instrument to ensure content validity. Logical judgment as to whether the instruments cover what it is supposed to cover is gotten from content validity.

#### 3.5.2 Reliability

Reliability refers to the repeatability, stability or internal consistency of a questionnaire (Maizura *et al.*, 2009). Reliability is explained as the measure of the extent to which a research instrument gives consistent output or data after repeated tests. It answers the question are score stable over time during the second administration of the instrument (Creswell, 2003). The study employed the use of Cronbach's alpha in testing the reliability of the instrument. Cronbach's alpha value is meant to show how closely related a set of individuals or elements are as a group. In order to agree with the reliability, it should be noted that a value of 0.7 alpha value is treated as good and the instrument is reliable (Cox & Hassard, 2005).

### 3.6 Data Collection Procedure

The questionnaire was designed in a manner that questions were organized under the four themes that were informed by the specific research objectives. The researcher administered the questionnaires to the respondents in person. According to (Emmel, 2013) the research instrument maybe modified as a result of the pilot depending on the reliability scores as well as the feedback from pilot respondents on the clarity of the instrument.

### 3.7 Data Analysis and Presentation

Data coding was carried out on the quantitative data and entered through the use of the Statistical Packages for Social Scientists (SPSS Version 25) and analyzed through the use of descriptive and inferential statistics. The descriptive statistics was also used and involved the use of absolute and relative percentages along with the measures of central tendencies. Inferential statistics involved the use of correlational and multiregression analysis to measure the type, the direction of the relationship and strength of association between variables.

## IV. RESEARCH FINDINGS AND DISCUSSIONS

### 4.1 Response Rate

There was a total of 100 questionnaires distributed to the target respondents at Kenya Airways. From this, 71 respondents gave their responses in all the questions asked. Consequently, as seen in Table 2, the questionnaire response rate was 71% which is satisfactory and substantial going by (Mugenda & Mugenda 2013) affirmations that a response rate that exceeds more than half is both acceptable and significant. This acceptable response rate is a result of unwavering efforts by the researcher and research assistants who tirelessly kept in touch with the respondent and collected the dully filled questionnaires on time.

Table 2: Response Rate of Respondents

Response	Frequency	Percentage
Returned	71	71%
Unreturned	29	29%
<b>Total</b>	<b>100</b>	<b>100%</b>

### 4.2 Pilot Study Results

The study conducted a pilot study to test the validity and reliability of the research instruments using the Cronbach's Alpha values for each variable and finally the overall items were used in the questionnaire. The respondents provided key information that was useful to modify the questionnaire thereby availing constructs that were valid. The reliability results were enumerated as seen in Table 3.

Table 3: Reliability Test Results

Variable	No. of Items	Cronbach's Alpha
Digital Call Center	9	0.926
Cloud Computing	5	0.882
Corporate Performance	14	0.934

### 4.3 Gender Distribution

The study sought information on respondents demographic characteristics. Information on gender was enumerated in Table 4.

Table 4: Gender Distribution of respondents

Gender	Count	Percentage
Male	46	64.8%
Female	25	35.2%
<b>Total</b>	<b>71</b>	<b>100%</b>

From table 4 above, it is evident that more than half of the respondents at 64.8% were male and 35.2% being female. This implies that Kenya airways staffing was male dominated, however, the female pool was far behind. This is encouraging implication particularly considering the fact that traditionally most organizations were male dominated. However Kenya airways needs to do more to bring more women to the organization to achieve gender parity of two third gender rule as per the Kenya constitution to achieve gender equality in employment.

#### 4.4 Age Distribution

The age brackets of the study respondents at Kenya Airways was enumerated in Table 5

Table 5: Age Distribution of Employees

Age Range	Frequency	Percentage
26-35 years	10	14.1%
36-45 years	35	49.3%
46-55 years	24	33.8%
Over 55 years	2	2.8%
<b>Total</b>	<b>71</b>	<b>100.0%</b>

From the above table 5, it is evident that majority of the respondents at 49.3% had their ages ranging from 36-45 years, then 33.8% ranging from 46-55 years, then 14.1% ranging from 26-35 years, and 2.8% ranging from Over 55 years. This is a clear indication that majority of the respondents were mature enough to comprehend the study and the respective questions and their effect on Kenya Airways performance. Furthermore, Kongiri (2012) asserted that age maturity is important to improve perceived reliability of generated results.

#### 4.5 Descriptive Statistics

The objective of descriptive statistics is to facilitate a study to significantly describe the distribution of measurements or scores by means of statistics or indices. The kind of statistics or indices utilized depends on the class of variables in a study and the level of dimensions. Mean, standard deviation and covariance measures were utilized to present the results pertaining to the correlation of the study variables.

##### 4.5.1 Digital Call Center on Corporate Performance

The first variable of the study was on digital call center. Respondents were requested to rate digital call center indicators on a scale of 1 to 5 where 5 represented 'Strongly Agree' and 1 'Strongly Disagree'. The summary of the results was enumerated as seen in Table 6.

Table 6: Digital Call Center on Corporate Performance

Statement	Mean	Std. Deviation
Overall the digital call center agents are a valuable team to Kenya Airways	4.34	.810
The digital call center has had a positive impact on service delivery in Kenya Airways	4.08	.824
I feel confident that the digital call center can efficiently manage client's queries	3.94	.954
Digital Call center has played a key role in customer retention	3.93	.867
The digital call center has made a considerable impact on the business growth of Kenya Airways	3.85	1.009
Generally, clients appreciate the services offered by the digital call center	3.75	1.010
The digital call center agents respond professionally to calls, emails and social media queries	3.75	.769
The digital call Center staff sufficiently address any queries raised	3.62	.916
The digital call center team is able to follow up on issues conclusively	3.61	.963
Valid N (listwise) =71		
<b>Aggregate Score</b>	<b>3.78</b>	<b>0.90</b>

The findings in table10 show that the overall aggregate mean score for digital call center variable is 3.78 and the standard deviation is 0.90. This on average affirmed that the respondents acknowledged that the digitalization through digital call center was relevant achieving increased corporate performance of Kenya Airways. The highest ranked indicator by the respondents among the digital call center variable with Mean of 4.34 and Standard Deviation of 0.810 was that overallly the digital call center agents are a valuable team to Kenya Airways. The second highest ranked indicator by respondents was the digital call center has had a positive impact on service delivery in Kenya Airways with Mean of 4.08 and Standard Deviation of 0.824. Respondents concurred they feel confident that the digital call center can efficiently manage client's queries with a Mean of 3.94 and Standard Deviation of 0.824. Respondents also agree that Digital Call center has played a key role in customer retention and that the digital call center has made a considerable impact on the business growth of Kenya Airways with Mean of 3.94 and Mean of 3.93 respectively. Further the respondents agreed that The digital call center has made a considerable impact on the business growth of Kenya Airways with a Mean of 3.85 and Standard Deviation of 1.009, tentatively with a Mean score of 3.75 agreed that generally, clients appreciate the services offered by the digital call center. Least ranked indicators among the digital call center indicators by the respondents was that the digital call center staff sufficiently address any queries raised and that the digital call center team is able to follow up on issues conclusively with a mean score of 3.62 and 3.61 respectively. The findings are in agreement with the assertion by (Wahu & Kagiri 2017), on the study Influence of Information Communication and Technology Strategies on Organization Performance in the Airline Industry posits that a firm's sustainability is highly dependent on its technologies to improve and advance operations.

4.5.2 Cloud Computing on Corporate Performance

The second variable of the study was on Cloud Computing. Respondents were requested to rate digital call center indicators on a scale of 1 to 5 where 5 represented 'Strongly Agree' and 1 'Strongly Disagree'. The summary of the results was enumerated as seen in Table 7.

Table 7: Cloud Computing on Corporate Performance

Statement	Mean	Std. Deviation
Our customers expect us to use technology such as cloud computing for ease of service delivery	4.20	.600
The use cloud computing technologies keep employees connected and enhance the rate of work flow	4.11	.766
Work is done efficiently and effectively as a result of cloud computing technologies	4.08	.751
Our organisation uses the latest architectures for cloud computing. (for example, use of office 365, Altea systems, cargo system)	4.06	.969
Adoption of cloud computing digital technologies has led to the digital transformation of the organisation	4.03	.845
Valid N (listwise) = 71		
<b>Aggregate Score</b>	<b>4.096</b>	<b>0.786</b>

The overall aggregate mean score for the second variable is 4.096 and the standard deviation is 0.786. This on average affirmed that the respondents acknowledged that the importance of cloud computing on corporate performance at Kenya Airways. The respondents strongly agreed with a mean of 4.20 and standard deviation of 0.600 with the statement that our customers expect us to use technology such as cloud computing for ease of service delivery. The respondents also strongly agreed that the use cloud computing technologies keep employees connected and enhance the rate of work flow and also that Work is done efficiently and effectively as a result of cloud computing technologies. The two statements had a mean of 4.11 and 4.08 respectively. The staff at Kenya Airways also agreed that the organization uses the latest architectures for cloud computing. (for example, use of office 365, Altea systems, cargo system) and further the adoption of cloud computing digital technologies has led to the digital transformation of the organization. The findings are in agreement with the assertion by (Mwikya & Obura, 2021),

using cloud computing in the organization improves processes efficiency and organizational effectiveness.

4.6 Correlation Analysis

The study determined the relationships among the study variables. The association between digital call center and cloud computing on corporate performance of airline industry in Kenya was determined through correlation coefficient. The relevant results are presented in Table 8.

Table 8: Correlation of Study Variables

		Corporate Performance	Digital Call Center	Cloud Computing
Corporate Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
Digital Call Center	Pearson Correlation	.546**	1	
	Sig. (2-tailed)	.000		
Cloud Computing	Pearson Correlation	.513**	.696**	1
	Sig. (2-tailed)	.000	.000	

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

The results in Table 8 show that the association between digital call center is highly correlated with corporate performance (r =.546 and P<0.05). This is a positive and moderate correlation coefficient implying that there exists a moderate relationship between digital call center and corporate performance that is statistically significant. This was followed by correlation between cloud computing and corporate performance (r =.513 and P<0.05), a moderate correlation value above 0.5 indicating that cloud computing is positively correlated to corporate performance and p-value of below 0.5 indicates that the relationship is statistically significant.

4.7 Regression Analysis

The purpose of this study was to examine the influence of digital call center and cloud computing on corporate performance of the airline industry in Kenya; a case study of Kenya Airways. The findings in this section show the model summary, analysis of variance and multiple regression coefficients for digital call center and cloud computing on corporate performance of the airline industry in Kenya.

Table 9: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
.577 <sup>a</sup>	.332	.313	.56718	.332	16.929	2	68	.000

The regression results in Table 9 indicate a positive association between digital call center and cloud computing on corporate performance (R=0.577). The coefficient of determination R-Square R<sup>2</sup> = 0.332 which implies that digital call center and cloud computing explains 33.2% of the variance in corporate performance. This result shows a strong influence of digital call

center and cloud computing on corporate performance. The overall model results were enumerated in table 10.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	10.892	2	5.446	16.929	.000 <sup>b</sup>
Residual	21.875	68	.322		
Total	32.767	70			

a. Dependent Variable: Corporate Performance

b. Predictors: (Constant), Digital Call Center, Cloud Computing

The values of F = 16.929 in Table 10 shows that digitalization statistically and significantly affects corporate performance

which means the regression model is a good fit of the data and that digital call center and cloud computing significantly influences the corporate performance of Airline Industry in Kenya. The level of significance is 0.000 which is less than 0.05 hence the regression model significantly predicts the dependent variable. The results indicate that there is significant relationship between digital call center and cloud computing on corporate performance;  $p < 0.05$  ( $P = 0.01$ ). Thus, the values of predictor variables are statistically significant with  $p < .05$  which means an increase in mean index of predictor variables will increase corporate performance.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	.860	.476		1.805	.076	-.091	1.810
Digital Call Center	.351	.132	.367	2.660	.010	.088	.614
Cloud Computing	.297	.159	.257	1.866	.066	-.021	.614

a. Dependent Variable: Corporate Performance

The Regression Coefficients results in Table 11 show that corporate performance had a positive index of 0.860 when Digital Call Center and Cloud Computing values are held constant. This implies that as Digital Call Center changes by one-unit, corporate performance also changes by 0.351 units; change in Cloud Computing values by one unit, influences an increase in corporate performance by 0.297.

Therefore, the optimal regression model for the study is:

$$\text{Corporate Performance} = 0.860 + 0.351 (\text{Digital Call Center}) + 0.297 (\text{Cloud Computing}).$$

The model shows that Digital Call Center was the predictor variable that highly affected Corporate Performance at Kenya Airways, followed by Cloud Computing.

## V. CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusions

Based on the finding of this study, in line with the digitalization of Airline Industry in Kenya, the study concludes that digital call center agents are a valuable team to the airline industry. Therefore, digital call center has had a positive impact on service delivery in Kenya Airways and generally in the airline industry.

Secondly, customers expect airlines to use technology such as cloud computing for ease of service delivery and that the use of cloud computing technologies keep employees connected and enhance the rate of work flow and also that work is done efficiently and effectively as a result of cloud computing technologies.

### 5.2 Recommendations

Airlines should increase in cloud computing adoption for ease of service delivery and that the use of cloud computing technologies keep employees connected and enhance the rate of work flow and also that work is done efficiently and effectively as a result of cloud computing technologies.

In relation to the digital call centre, it is important that the airline industry invests in state of the art call centers that bring on board social media, and other interactive platforms to ensure services are offered to customers efficiently and effectively. It is also important for the staff deployed to these centers are trained on the use of this digital assets for service delivery.

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