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CLOUD COMPUTING TECHNOLOGY PRACTICES AND PERFORMANCE OF AGRICULTURE PROJECTS IN NYANDARUA COUNTY, KENYA

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ABSTRACT

Cloud computing has surfaced as a transformative technology with the eventuality to revise the agriculture industry. Cloud computing technology and agriculture practices was a crucial research area to cover, to increase farm productivity. In recent times, cloud- based results have been increasingly integrated into agricultural practices, offering growers and stakeholders access to advanced data analytics, remote monitoring, and perfection agriculture capabilities. Cloud computing in agriculture encompasses operations, from crop operation and supply chain optimization of end products. Farmers are now using cloud- based platforms to collect, store, and dissect vast quantities of data from detectors, satellites, and literal records. This data- driven approach enables informed decision-making, resource optimization, and bettered agriculture issues. The benefits of cloud computing in agriculture are multifarious. It empowers growers to make data- driven opinions, optimize resource allocation, and enhance crop yields while reducing input costs. Precision agriculture, made possible through Cloud- computing technology tools, allows for targeted irrigation, fertilization, and pest control, leading to further sustainable agriculture practices. Cloud computing platforms also facilitated real- time access to request information, enabling farmers to make informed choices about when and where to sell their products. However, the relinquishment of cloud computing in agriculture isn't without challenges, espousing this technology and ensuring that small- scale and resource- constrained growers can pierce and profit from cloud technology which remains a challenge in numerous regions. The research data was collected from 196 staff members and farmers within Nyandarua county that consisted of ICT, communication, finance, administration, agriculture, Economic planning, trade and youth empowerment departments. Primary data was collected by the use administered questionnaire and secondary data from Nyandarua County government materials and records. The questionnaires were reviewed and evaluated for content validity and reliability. Descriptive and inferential statistics was utilized in the analysis of data and presented by means of Statistical Package for Social Sciences (SPSS V27). Analyzed data was in the form of graphs, tables and charts while qualitative findings were presented thematically. It is thus governments and associations to increasingly recognize the significance of bridging the digital peak in agriculture to ensure equitable access to technology- driven benefits for all growers.

Key Words: Cloud computing technology, agriculture practices, Stakeholders' Engagement, Policy Regulation, Performance, Agriculture Projects, Nyandarua County

Background of the study

Paraforos et al, 2021, defined cloud computing as the delivery of computing services involving servers, storage, databases, networking, software, analytics, and intelligence — over the internet that is the cloud to offer rapidly modernization, flexible assets, and recession of scale. Cloud computing technology practices encompass a wide range of principles and approaches for effectively exploiting cloud resources to deliver computing services and operations. These practices are aimed to assist associations make the utmost of the advantages offered by cloud computing, such as scalability, inflexibility, cost- effectiveness, and accessibility. Some of the crucial cloud computing technology practices are Cloud Service Models Understand the different cloud service models infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS).

Choose the right model for your specific requirements, Cloud Deployment Models valuate different cloud deployment models, entailing public, private, hybrid, and multi-cloud, and select the one that aligns with your security, consent, and performance demands, Cloud Security Implement robust security practices, similar as data encryption, access control, identity and access operation, and risk disclosure, to protect data and operations in the cloud (Sunyaev,2020). Apart from agriculture the main contributor to the Gross Domestic Product (GDP) of the country (Ashokkumar, 2019), but it is also the top source of income for the government. People need to be suitable to get food and other musts from the agriculture sector. The crowd needs to be suitable to get their food and inventories from the agriculture sector. Although the population is expanding at a rapid-fire rate, the quantum of land that may be used for agriculture purposes is continuing to drop as a result of the growth of a variety of enterprises and real estate (Aharari, 2021).

Nations in Africa should apply resource- saving technologies in order to boost their food product. These technologies include pest control; recycling of nutrients; water recycling process; water harvesting process; conservation of water and soil. As a result, growers become specialists at managing their granges' ecosystems. The agriculture industry needs a bigger volume of workers and a bigger number of staffs. Unfortunately, people are abandoning the agriculture industry, which is resulting in an adding labour deficiency in the industry. Thus, agriculture must use intelligent agriculture technologies in order to meet the rising demand caused by an increase in the population while reducing the quantum of labour needed. The application of information technology (IT), which enables perfection in agriculture, agro-automation, and ranch operation information systems, is at the heart of smart agriculture. The application of cloud computing in agriculture represents a vital shift from traditional agriculture styles to data- driven perfection agriculture.

With global food demand projected to increase significantly in the coming decades, the need for sustainable and effective agriculture practices has no way been more burning (United Nations, 2017). Cloud- based results have surfaced as important tools to address this challenge by enabling growers to optimize resource allocation, ameliorate crop yields, and enhance overall productivity. The arrival of cloud technology has normalized access to data and computational resources, allowing growers, anyhow of the scale of their operations, to harness the power of big data and analytics (Prasad, et al 2021). This democratization has profound implications for global agriculture, as it empowers small- scale growers to contend on a position playing field with their larger counterparts. By making Cloud- based tools accessible, scalable, and affordable, cloud computing has begun to bridge the digital peak in agriculture, where information and technology were preliminarily concentrated in the hands of a many.

One of the crucial drivers of Cloud relinquishment in agriculture is the capability to collect and analyze large amount of data. Ultramodern agriculture is increasingly reliant on data from detectors, satellites, rainfall stations, and literal records to make informed opinions (Gebbers,

2019). Cloud platforms offer the necessary structure to store, process, and visualize data, enabling growers to cover crop conditions, manage irrigation systems, prognosticate rainfall patterns, and optimize supply chains. These data- driven perceptivity empower growers to apply precise, sustainable, and environmentally friendly agriculture practices (Johnraja et al , 2024). Despite the transformative eventuality of cloud computing in agriculture, threats still carry on. Non-urban areas, where agriculture is frequently concentrated, may warrant dependable internet connectivity, hindering the flawless operation of Cloud- based results (Qasim, 2020). Likewise, enterprises regarding data security and privacy are utmost, as agriculture data contains sensitive information about crop yields, livestock health, and market strategies (Forcén-Muñoz, 2021). Addressing these challenges is essential to realizing the full eventuality of cloud technology in agriculture.

In this period of rapid technological advancement, cloud computing is poised to continue reshaping the agriculture geography. Advancements in Internet of Things (IoT) technologies, machine learning, and artificial intelligence are anticipated to further enhance the capabilities of cloud-based agriculture results, making agriculture indeed more effective, sustainable, and flexible (Liu, 2019). Government programs and enterprise are increasingly recognizing the significance of supporting cloud technology relinquishment in agriculture to ensure food security and pastoral development (FAO, 2019). The integration of cloud computing into agriculture represents a significant shift in the way agriculture is rehearsed and managed. It has the implicit to address the challenges of feeding a growing global population while promoting sustainability and inclusivity. This paper explores the relinquishment of cloud computing into agriculture, probing into its benefits, challenges, and unborn prospects.

Statement of the Problem

Information Communication Technology (ICT) is viewed as an important contributor for the achievement of government programs for profitable growth and development. Therefore, globally, utmost governments are espousing various state- of- the art Information Technologies (IT) such as cloud computing to advance their agriculture operations (Uddin et al, 2021). Cloud computing has been bandied as a new technology development that can give several advantages in agriculture. Also, cloud computing relinquishment rate is not growing as nimble as anticipated (Symeonaki et al, 2019). However, ICT policy regulation terrain in Kenya remains fractured and unconducive to creating affordable and good quality high speed broadband access – a necessary, though not sufficient condition for cloud services to be optimized (access Kenya, 2017). The relinquishment of cloud computing in Kenya is still arising.

The rising demand for potatoes in Kenya has largely evolved in response to changes in civic population growth, taste and preferences, and potato consumption habits, which have led to increased purchase of processed products like as crisps, French fries, and other value- added products. escalated demand for processed potatoes has pushed the per capita consumption of potatoes from 35 kg per person in 2019 to 63 kg in 2021 (Wakaba et al, 2022). Since Nyandarua County is one of the significant potatoes producing regions in Kenya, it produced 18% and 42% of the total potatoes produced in Kenya in 2009 and 2011 appropriately (MoA, 2010a). The county attained 24% and 25% of the public potato acreages in 2010 and 2011 collectively (MoA, 2012a, b).

In Nyandarua, potatoes are produced in two seasons (April- May and October- December) with harvesting being done after 4 months after planting (Roukh et al., 2020). Aspects affecting potato yield included limited quality seed force, pests and diseases and poor agronomic practices. Although potato growers in Nyandarua County were trained on potato product technologies, their average yield was ≤ 16 tonnes per hectare compared to the civil potential of 30 tonnes. County governments have lagged behind deployment of cloud computing technology in agriculture. Despite the great advantage of cloud computing numerous exploration discoveries are in the

developed countries (Moysiadis, 2021) and veritably few in the developing countries. Wanjiru (2020) realized that cloud computing technology is still unfamiliar to both scholars and private sector in Kenya. Nyandarua county has not entirely familiarized and integrated its services through cloud computing technology practices due to lack of relevant technical skills, lack of the right support on Digitalization, not having imposed ICT policies and failure to understand the practices of cloud computing technology, Nyandarua County report (2017). Hence this study will seek to address the exploration gaps bandied by determining the influence of cloud computing technology practices and performance of agriculture projects in County Government of Nyandarua.

Research Objectives

(i) To establish the influence of stakeholders' engagement and performance of agriculture projects in Nyandarua County, Kenya.
(ii) To examine the influence of policy regulation and performance of agriculture projects in Nyandarua County, Kenya.

LITERATURE REVIEW

Theoretical Literature review

Policy theory

The relationship between stated objectives and likely conduct is the basis of expression and perpetration of a policy (Hofman & Visser, 2021). The policy theory explains how the development, application and appraisal of a policy regulation is grounded on a particular docket (Ashokkumar, 2019). Savitskaya et al (2020) further discusses how policy influences the governance structures and makes it easier for all users to understand and appreciate the intended aim. According to Johnraja (2024), a policy regulation outlines how people, systems and issues are linked to the world. Policies are developed to achieve certain values (Chaudhuri et al, 2021). The setting of a lineup is critical in the development of a policy regulation (Gual, 2023). At this stage an association shows the intent to act on a specific problem through allocating finances and resources. According to Kysh (2021), dialogue among stakeholders helps to define areas of interest, present their views and set points of action. Policy theory in the agriculture sector in Nyandarua, Kenya requires that through stakeholder engagement there's clear setting of the intended dockets and expression of guidelines that drive the perpetration of agricultural practices and use of cloud computing.

Conceptual Framework

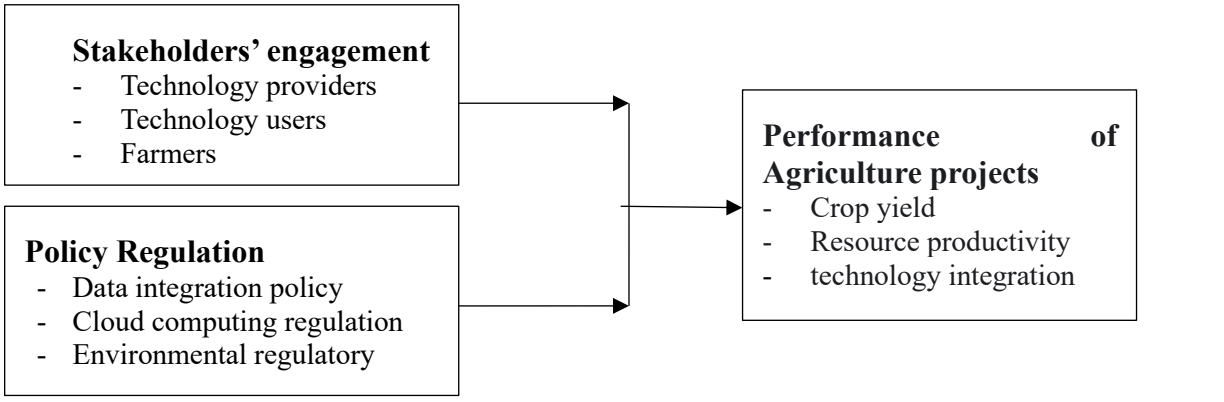

Figure 0.1**: Conceptual framework**

Empirical Review

Cloud stakeholders

Wibowo et al.(2020) claim that cloud players are now necessary for agronomy. By fabricating adaptable and rapid farming systems, similar as storage systems, systems for automating complicated processes, and outlining online social media and mobile technology. Firms believe this will help them respond more snappily than with traditional farming deployments to clients' fleetly changing requirements due to increase in population. The request can set up their apps in the cloud to assess and record the cloud relinquishment stories of success, troubles, and obstacles. Cloud utilization problems, possibilities, and success rates of IT feasibility and success factors are also accessible. This appraisal can also offer clear regulations for importing the benefits and downsides of cloud suppliers for cloud collaborations(Prasad, 2021).

Cloud calculating workers disclose a set of software interfaces or APIs that guests use to manage and interact with cloud services. These interfaces are used for planning, operation, composition, and monitoring. The safety of these key APIs is a imperative for the security and connection of general cloud services. These interfaces, which range from authentication and access control to encryption and exertion monitoring, need to be erected to baffle both purposeful and unintentional attempts to violate rules.Stakeholders and other parties constantly expand upon these interfaces to give their guests with value- added services.

This introduces the new layered API's complexity and raises the threat because stakeholders could have to give their credentials to outside parties in order to allow their agency(Quinton et al, 2021). The creation of a unique cloud strategy is critical for the county. They should plan to make use of available resources, similar to platform as a service(PaaS), infrastructure as a service(IaaS), and software as a service(SaaS) ways, which can be used in the deployment designs, reference architectures, and bespoke blueprints designs. IaaS providers gauge up the delivery of their services by pooling resources. The radical parts of infrastructure, similar to CPU caches and GPUs, constantly were not made to have strong insulation features for amulti-tenant armature. A virtualization hypervisor mediates access between client operating systems and the certain computational resources in order to close this gap. Still, indeed hypervisors have shown faults that allowed guest operating systems to incorrectly take control of or influence over the elementary platform. It's advised to apply a defense- in- depth strategy that includes network, cipher, and storage security enforcement and monitoring. To make sure that individual guests don't affect the operations of other clients using the same cloud provider, strong compartmentalization should be used. Guests should not be suitable to view the factual or leftover data, network exertion,etc. of any other client(Yao et al. 2021).

Policy regulation

European Union and public and indigenous governments have designed policies and programs that support and enhance development and growth of ICT in those regions(Matijašević and Kovačević 2016). ICT is basically evolving and as similar, programs and any other form of regulation need to be constantly revised to reflect current trends. According to Chaudhuri et al(2021), a policy acts as a document that validates specific fancies and subventions blessing of specific course of conduct. Gual (2023) further expounds that the developing a policy regulation is princicloudy intended to break a problem that has the influence of the authority be it in government or associations who identify problems and define pretensions to achieve specific docket. Conforming to Kysh (2021), converse among stakeholders define areas that bear to be attended to, determine the positions of the stakeholders and put limits on anticipated policy regulation issues. Given the environs, the process of policy regulation expression is basically about

getting input that's spoken, contextualized and proved to validate a specific position and docket and give allotment to specific groups to act in authority.

The policy documents for the Kenyan government have failed to merge the part of ICT as facilitator of varied intents that have been allocated to transfigure the country into a recently Industrialized Country by the time 2020(Patel, 2006). The purpose of relinquishment of the public ICT policy regulation within public institutions is to insure advanced service delivery from the manual processes to ICT enabled services(Hofman and Visser, 2021). The absence of ICT policy regulation leads to significant complexities of irrelevant costs due to performance of same tasks and functions with similiar intentions by various authorities(Janssen and Cresswell, 2005). The Kenyan government is determined to achieve the vision 2030 and targets, which are more in line with the focus of the profitable pillar on ICT relinquishment. Vision 2030 is one of the crucial forces behind the nonstop development and updating of the public ICT policy regulation. The Government's accreditation for numerous ICT- based operation, the creation of the Ministry of Information, Communication and Technology and ICT Authority are strong pointers of Government's commitment to enforcing and achieving the vision 2030 pretensions under National ICT Policy(Kiveli, 2015).

RESEARCH METHODOLOGY

The study acclimatized a descriptive study design and look at how the material variables are related to one another. The target population was within the county government of Nyandarua associated to cloud computing technology practices and agriculture practices which will include three hundred and eighty-four (384) workers in ICT, communication, finance, administration, agriculture, Economic planning, trade and farmers. The study employed purposive sampling to elect repliers while simple random sampling was employed to elect section heads and middle position workers based at the departmental position. Simple random sampling was used to avoid biasness and every single individual had an equal chance to share in the study. The sample size (n) of the study was calculated using the Yamane formula, (1967). A sample size of one hundred and ninety-six (196) repliers was chosen for the study. From the sample frame, purposive sampling was used to collect data from 196 repliers who were the sample Size.

Primary data for the study was collected with questionnaires. Data attained from the field was coded, cleaned out, and entered into the computer for analysis using the Statistical Package for Social Sciences (SPSS interpretation 27). The data was briefed in order to view arising trends and issues around specific themes, which are dependent on the variables and manifesto. The experimenter compounded scores from gauges for the variables to gain the scores appropriately. According to Ji et al (2012) the compounding of scores from different indicators into indices is based on an integration of both qualitative and quantitative styles depending on collected data. Descriptive statistical procedures including cross-tabulations and frequency distributions were used to give comparisons and contrasts between strategic exposures and service delivery. Inferential statistical analysis was also used. The collected data was argued using multiple regression and correlation analysis, and the significance of each independent variable was tested at a confidence position of 95%. The multiple regression model was also utilized.

FINDINGS AND DISCUSSIONS

According Creswell (2014), response rate is the ratio of the interviewed respondents to the sample size intended to be covered by the study. According to Greenfield and Greener (2016) a response rate of 75 per cent is adequate for analysis, for making conclusions and making inferences about a population. Further, Russell (2013) indicates that a response rate of 50% should be considered average, 60% to 70% considered adequate while a response rate of above 70% should be regarded as excellent. This implies that the response rate was adequate for analysis, drawing conclusions

and reporting pilot study. Questionnaire return rate was above 70 percent which is adequate for analysis Mugenda, (2008).

Descriptive Statistics

Descriptive statistics entails measures of central tendency (mean), measures of dispersion (standard deviation), frequencies and percentage (Russell, 2013). This study used descriptive statistics with the help of Statistical Package for Social Sciences to analyze the study variables.

Influence of stakeholders' engagement on the performance of agriculture projects

This section examined the influence of stakeholders' engagement on the performance of agriculture projects. Opinions were sought from the respondents with regard to stakeholders' engagement on the performance of agriculture projects.

Table 1: Influence of stakeholders' engagement on the performance of agriculture projects

Statements	Mean	Std. Deviation
As a cloud service provider have you engaged with any specific cloud service providers for agriculture performance solutions	4.02	0.692
Cloud technologies can be leveraged together to enhance agricultural performance	3.94	0.899
Compliance considerations are relevant when deploying cloud solutions in the agriculture sector	3.65	0.854
Cloud computing can improve efficiency and performance in agriculture processes	3.98	0.721
Integration of cloud computing technology can positively affect your overall agricultural performance	3.61	0.860
To what extend are you familiar with cloud computing technology in the context of agriculture	3.90	0.770
Stakeholders collaborate in the decision-making and implementation processes related to cloud computing in agriculture	4.06	0.775
Aggregate	**3.31**	**0.80**

The findings on *table 1* indicate that the majority of the respondents agreed that a cloud service provider have engaged with specific cloud service providers for agriculture performance solutions of with a mean of 4.02. To a large extent, respondents agreed that Cloud technologies can be leveraged together to enhance agricultural performance with a mean of 3.94. A number of respondents also strongly agreed that compliance considerations are relevant when deploying cloud solutions in the agriculture sector with a mean of 3.65. A large number of respondents agreed that cloud computing can improve efficiency and performance in agriculture processes with a mean of 3.98. Integration of cloud computing technology can positively affect your overall agricultural performance with a mean of 3.61. A number of responded agreed that they are familiar with cloud computing technology in the context of agriculture with a mean of 3.90. Stakeholders collaborate in the decision-making and implementation processes related to cloud computing in agriculture with a mean of 4.06. All the seven times had standard deviation values that are less than 1 indicating that there was little deviation of respondents rating of the items around the average position.

Table 2: Extent of agreement on Influence of stakeholders' engagement on the performance of agriculture projects

Statement	Frequency	Percent	Cumulative percentage
Strongly Agree	36	25%	25%
Agree	59	41%	66%
Neutral	45	31%	97%
Disagree	4	3%	100%
Strongly Disagree	0	0%	
Total	145		

The data on table 2 indicates that 66% of the respondents agreed & strongly agreed on the criticality of stakeholders' engagement to the performance of agriculture projects. 31% of the respondents were neutral. Notably, 3% of the respondents disagreed on the criticality of stakeholders' engagement to the performance of agriculture projects**.**

Influence of Policy regulation on the performance of agriculture projects

This section examined the influence of policy regulation on the performance of agriculture projects. Opinions were sought from the respondents with regard to the influence of policy regulation on the performance of agriculture projects.

Table 3: Influence of Policy regulation on the performance of agriculture projects

Statements	Mean	Std. Deviation
Our operational policies and procedures are flexible enough to embrace new technologies	3.88	0.744
It is a requirement that all reports are typed. No handwritten work is acceptable.	3.54	0.850
All software has to be genuine; no pirated software is allowed.	3.46	1.067
Computers and software are updated on a regular basis to keep up with new trends.	3.92	0.722
I am aware and have read our Policy regulation.	4.01	0.768
Current policies and regulations support the integration of cloud computing in agriculture	4.02	0.759
Current policies address data security and privacy concerns associated with cloud computing in agriculture	3.72	0.743
Aggregate	**3.79**	**0.81**

The findings on *table 3* indicate that a high number of the respondents agreed that the operational policies and procedures are flexible enough to embrace new technologies with a mean of 3.88.

To a large extent, respondents agreed that it is a requirement that all reports are typed. No handwritten work is acceptable with a mean of 3.54. Majority of respondents agreed that all software is genuine; no pirated software with a mean of 3.46. A high number of respondents agreed computers and software are updated on a regular basis to keep up with new trends with a mean of 3.92. Respondents agreed that they are aware and have read the Policy regulation with a mean of 4.01. In addition, respondents agreed that current policies and regulations support the integration of cloud computing in agriculture with a mean of 4.02. All service and operational level agreed with current policies address data security and privacy concerns associated with cloud computing in agriculture with a mean of 3.72.

Table 4: Extent of agreement on the Influence of Policy regulation on the performance of agriculture projects

Statement	Frequency	Percent	Cumulative percentage
Strongly Agree	32	22%	22%
Agree	57	39%	61%
Neutral	51	35%	96%
Disagree	4	3%	99%
Strongly Disagree	1	1%	100%
Total	145		

The data on table 4 indicates that 61% of the respondents agreed & strongly agreed on the criticality of policy regulation to the performance of agriculture projects. A further 35% of the respondents were neutral and a further 4% disagreed & strongly disagreed.

Measures of performance of agriculture projects

This section examined the measures of performance of the agriculture projects. Opinions were sought from the respondents with regard to the measures of performance of the agriculture projects.

Table 5: Measures of performance of agriculture projects

Statements	Mean	Std. Deviation
Improvement in crop yields has been observed since the adoption of cloud computing technology	3.92	0.878
Cloud computing has enabled precision agriculture practices in your project	4.07	0.751
Cloud computing has affected the overall resource utilization efficiency in your agriculture project	4.08	0.777
Cloud-based storage solutions are being utilized for agricultural data	4.11	0.800
Agriculture project has implemented cloud computing technology solutions	3.93	0.779
Cloud computing technology has improved the efficiency of data management in your agriculture project	4.08	0.722
Cost savings or cost-effectiveness due to the adoption of cloud technology in your agriculture project	3.98	0.845
Aggregate	4.02	0.79

The findings on *table 5* above indicate that Improvement in crop yields has been observed since the adoption of cloud computing technology with a mean of 3.92. Cloud computing has enabled precision agriculture practices in your project with a mean of 4.07. Cloud computing has affected the overall resource utilization efficiency in your agriculture project with a mean of 4.08. Cloud-based storage solutions are being utilized for agricultural data with a mean of 4.11. Cloud-based storage solutions are being utilized for agricultural data with mean of 3.93. Cloud computing technology has improved the efficiency of data management in your agriculture project with a mean of 4.08. Cost savings or cost-effectiveness due to the adoption of cloud technology in your agriculture project with a mean of 3.98.

Correlation Analysis

The correlation analysis is used to scrutinize the association between independent and dependent variables. The study used the Pearson Moment Correlation analysis to examine the association between the stakeholders, Policy regulation with the performance of agriculture projects. As shown in Table 4.6.1 below, stakeholders had a positive significance to the performance of agriculture projects with a correlation of .876; (r = 0.876). while Policy regulation had a positive significance to the performance of agriculture projects with a correlation of .823; (r =0.823).

Table 6: Correlations Coefficient

		Stakeholders' engagement	Policy Regulation	Performance of Agriculture Projects
Stakeholders' engagement	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	145		
Policy Regulation	Pearson Correlation	.966**	1	
	Sig. (2-tailed)	.000		
	N	145	145	
Performance of Agriculture Projects	Pearson Correlation	.963**	.934**	1
	Sig. (2-tailed)	.000	.000	
	N	145	145	145

Model Summary

The model summary assists in analyzing the variation of the dependent variable as a result of the corresponding changes of the independent variables. The coefficient of determination was conducted to assess the suitability of statistical model in forecasting future results. The study analyzed the variations of the performance of Agriculture projects due to the variations of stakeholders, and Policy regulation. R squared was 0.968 implying that there was 96.8% variation in the performance of Agriculture projects, due to changes in stakeholders, and Policy regulation. The remaining 3.2% imply that there are other factors that lead to the performance of Agriculture projects which were not discussed in the research study. R is the correlation coefficient which shows the relationship between the study variables thus implying a strong positive relationship between the study variables of 0.984 from the findings as shown in Table 7. Adjusted R squared is coefficient of assurance which shows the changes in the dependent variable as a result of variations in independent variables

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.984[a]	.968	.961	.148

Analysis of Variance

The analysis of variance (ANOVA) assists in determining the significance of the data that has been used in the study. The ANOVA statistics indicated that the processed data had a significance level of 0.000 thus making the data ideal for conclusions to be made on the population's parameter as the significance value (p-value) is less than 5%. The results obtained after the calculation of F indicated that it was greater than F critical (223.750>2.40), the F-statistic is significantly greater than 1 thus indicating the appropriateness of the model in testing the relationship between the study

variables. This means that the model is appropriate for use running a factor analysis. As shown in Table 8. This shows that stakeholders, Policy regulation had a significant influence on the performance of Agriculture projects.

Table 8: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	64.861	4	16.215	223.750	.000[b]
	Residual	10.146	140	.072		
	Total	75.007	144			

Beta Coefficients of the study Variables

The regression equation was:

$Y = 0.895 + 0.688\ X1 + 0.400\ X2$

The above equation shows clearly that holding stakeholders, and Policy regulation, the variables will significantly influence the performance of the agriculture projects as shown by constant = 0.895. This is also shown in Table 9.

Table 9: Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
1 (Constant)	0.895	.757		2.505	.013
Stakeholders' engagement	.688	.102	.687	6.712	.000
Policy Regulation	.400	.067	.457	6.000	.000

Stakeholders' engagement

The Stakeholders' engagement as a factor is statistically significant to the influence of cloud computing on the performance of Agriculture projects as shown by ($\beta = 0.688$, $p=0.000 < 0.05$). This implies that the implementation of the Stakeholders' engagement had a significant positive relationship with the performance of agriculture projects. Thus, implying that a unit increase in the use of the Stakeholders' engagement will result in an increase in the performance of agriculture projects.

The Policy regulations as a factor is statistically significant to the influence of cloud computing technology on the performance of the agriculture projects as shown by ($\beta = 0.400$, $p=0.000 < 0.05$). This shows that the implementation of the Policy regulations had a significant positive relationship with the performance of the agriculture projects. This implies that a unit increase in the use of the Policy regulations will result in an increase in the performance of the agriculture projects.

Conclusions

From the studies it is evident that cloud computing technology is critical for improving in the whole agriculture projects. Cloud computing Technology ensures that there is useful data for all involved in agriculture projects. This in effect plays a vital role in achieving high yield in Agriculture projects. By institutionalizing the appropriate policy regulation, the intended agriculture projects requirements are met and also there is realization of the expected benefits and high yield. Meeting the expectations of the stakeholders is very important in achieving successful implementation of Agriculture projects. The study concludes that the use of Policy regulation relates positively to the performance of Agriculture projects.

Cloud technology constitute practices that requires an elaborate cloud stakeholder's environment. These serves to ensure that there is a smooth and seamless operation of all the systems. Statistically, Stakeholders' engagement has a significant positive relationship with the performance of the agriculture projects. Therefore, a unit increase in the enforcement of Stakeholders' engagement will result in an increase in the performance of the agriculture projects. The study concludes that the use of Stakeholders' engagement relates positively to the performance of Agriculture projects.

Recommendations

The county government should adopt and enforce appropriate cloud technology practices to ensure the intended agriculture projects requirements are met and also there is realization of the expected benefits and resource productivity in agriculture. The cloud computing technology practices should be put in place for comprehensive awareness and sensitization programs for all stakeholders. Given that technology is dynamic, the cloud computing technology practices should be continuously reviewed so as to address any issues that might arise as well as guide in resolving any problems through various technological initiatives.

Areas for further Study

The main objective of the study was to examine the cloud technology practices on performance of Agriculture projects in Kenya. From model summary 3.2% shows there are other factors that lead to the performance of Agriculture projects which were not discussed in this research study and recommends further studies on those factors .The study recommends other studies should be carried out on other cloud technology practices that were not considered in this research study. The detailed influence of each variable in the performance of Agriculture projects is also a further research area that can be considered. The scope of the study was limited to Nyandarau county of agriculture projects. A similar study can also be done in other county governments.

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