



# Perceptions of Agricultural Extension Staff towards Financial Support Before and After Devolution in Kericho County, Kenya

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## Authors' contributions

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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## ABSTRACT

Agricultural extension services are put in place to improve rural development in many nations. Devolution of agricultural extension services have been tried in many nations with mixed results. Since the implementation of the devolved system of governance in Kenya, its effect on agricultural extension service delivery, in Kericho has not been studied and documented. The purpose of this study was to determine the perception of agricultural extension staff towards financial support in Kericho county before and after devolution in Kenya. The study adopted a descriptive research design, which is used to describe characteristics of a population or phenomenon being studied. The target population comprised of 117 agricultural extension officers in Kericho County. The study used a census sampling method because the target population was very small; thus, all the units in the target population were considered. However, inclusion criteria were applied by only including individuals who were in employment both before and after devolution. Data were collected using a questionnaire. The data collected were analysed using descriptive statistics (means, standard deviation, frequencies, and percentages) inferential statistics (paired correlation and paired t-test) with the aid of SPSS. The results show that the majority of the respondents, (86%) were either positive or very positive towards financial transparency before devolution as opposed to the only 4.3% after devolution. The t-test results showed a statistically significant difference in perception of

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agricultural extension officers towards funding of agricultural extension services before and after devolution in Kericho county. The study concludes that financial support was better before devolution compared to after devolution. The study suggests that the county government of Kericho should improve their financial commitment to promote effective and efficient delivery of extension services.

*Keywords: Devolution; financial support; agricultural extension services; perceptions.*

## 1. INTRODUCTION

Agricultural extension is one of the institutional sectors that advance the exchange and transfer of information that can be changed into useful knowledge. Agricultural extension, which is a message delivery framework, has a part to play in agricultural advancement. It fills in as a source of guidance and help for farmers in enhancing their marketing and production [1]. Agricultural extension additionally offers a channel through which farmers' issues can be identified for research and alteration of agricultural arrangements to the benefit of communities [2]. Agricultural extension services are put in place by governments, to improve rural development in many nations [3].

Extension is evolving, and agricultural extension workers' roles and perception are changing with new system of governance. The attitudes and opinions of extension officers on devolution may affect their work and how they go about it [4]. The experiences and observations of the agricultural extension officers, both positive and negative, are important in mapping out the perception of stakeholders on devolved agricultural extension. The effectiveness of the agricultural extension services provided is influenced by the perceptions and attitudes of agricultural extension officers toward governance structure and policies put in place [5].

The perception of agricultural extension officers has been studied. However, there are limited studies that focus on agricultural extension officers' perception in a devolved system of governance. It is essential to understand the perception of agricultural extension officers in a devolved system of governance. A study examined South African extension officers' perceptions of their job, views on the objectives of extension, and conception of agriculture [4]. Ladebo also examined the attitude towards trust among co-workers and between employees and management [6]. The perceptions of trust have the dimensions of: management-affective, coworkers-affective, management-cognitive, and

co-workers-cognitive. In another study [7] examined the educational needs of extension agents regarding sustainable agriculture in Khorasan Province, Iran. These studies concluded that the perception of agricultural extension officers in relation to all aspects of delivering the services to the farmers is important. Due to global dynamic changes structures and policies, it is critical to continuously determine the perception of agricultural extension officers towards such changes.

Studies on devolution of agricultural extension have indicated mixed reactions of staff's perception in relation to the effect of devolution on the conveyance of service to the poor people. In India, devolution is fixated on the lack of steady conditions such as a political sense of duty regarding power control, mobilisation of resources for the poor, responsibility of elected officials and sufficient resources [8]. Regardless, these confirmations are not antagonistic to the devolution of administration itself, but rather generally concentrate on the process of devolution that intends to accomplish better delivery of service to the socially-impaired individuals [9]. Devolution has been embraced in many countries such as the U.S., Pakistan, and India. The fundamental basis for the move is that devolved administration shifts basic leadership expert to bring down authoritative and political level units to plan and execute improvement programs with the dynamic inclusion of members [10]. The idea is sound, but its implementation in developing nations has so far not been smooth for different reasons. For instance, some central governments are hesitant to give up their control over basic leadership, particularly in monetary matters which affects the implementation of agricultural extensions services [11].

Due to shifting financial needs for agricultural extension programs, governments in several countries have developed devolution policies [12]. In many cases, the inability to provide extension services to farmers is attributed to a lack of financial assistance. Agriculture extension

officers must have enough funding for administrative or recurring capital spending for them to carry out field operations [13]. Authorities at the state and local levels can develop creative solutions to ensure that their departments' finances remain stable, according to Zalengera and colleagues [14]. According to Oakley, program implementation in decentralized systems may be delayed using pre-and post-expenditure audits.

In Ghana, a study looked at the financing for agricultural extension [15]. Although the Department of Agriculture (DOA) is decentralized, it depends on the central government to support its work. Although this money is intended to be distributed quarterly, at the beginning of each quarter, the analysis discovered that they have not been forthcoming since 2012. Further research found similar findings at Ghana's Ga West Municipal Assembly and Shai-Osodoku District Assembly [16]. However, according to this research, not only are monies provided late but also fall short of the Department of Agriculture's (DOA's) planned funding. The central government's failure to satisfy the financial demands of its ministries and departments has been blamed for fiscal insufficiency and delays.

Another study indicated that subventions from the central government are crucial for funding agricultural extension programs in Uganda [17]. Local governments in Uganda became more reliant on central government financing after the graduated tax, which accounts for 80% of local income, was repealed in 2005.

In Kenya, Agricultural extension services have been in existence since the establishment of the British Colonial government to offer guidance to farmers in order to boost agricultural production in addressing issues of food security. In Kericho County, agriculture is the main source of livelihood, contributes more than 80% of household incomes, and employs over 50% of the County's population. Extension services in Kericho County are offered especially by County Department of Agriculture, Livestock and Fisheries (DALF). Although agricultural services function was devolved to the county, the effect of devolution on the delivery has not been studied in Kericho County. The purpose of the study was to determine agricultural extension staff perception towards financial support in Kericho county before and after devolution in Kenya.

## 2. METHODOLOGY

The study adopted a descriptive and comparative research designs. A descriptive research attempts to obtain information that describes existing phenomena. Descriptive studies are intended to find out "what is," thus observational, and survey techniques are often used to collect descriptive data from the subjects [18]. Descriptive research design was appropriate for this study because the researcher aimed to describe accurately and systematically, that is, examine the perception of agricultural extension officers towards financial support before and after devolution in Kericho County. Comparative research essentially compares two groups to draw a conclusion about them [19]. This study compared the perception of agricultural extension officers before and after devolution. Respondents were asked to indicate their perceptions towards different aspects of financial support to agricultural extension before and after devolution. The respondents were given a five-point Likert-scale as follows: (1= Very negative, 2= negative, 3=somehow positive, 4= positive and 5= very positive). The data were analysed using frequencies.

### 2.1 Sample Size and Sampling Procedures

The study used census sampling method because the target population is small. Census is a statistical method that studies all the units or members of a population. Therefore, all the units in the target population were considered, that is 117 extension officers were included in the study. However, since the study focused on two different periods, before devolution (2006-2012) and after devolution (2014-2020), all individuals who served in both periods were included in this study. These resulted in a sample of 93 respondents.

### 2.2 Instrumentation

Data were collected using a questionnaire for the extension staff. The questionnaire was found to be appropriate for this study because large amounts of information can be collected from many participants in a short period of time and in a relatively cost-effective way. The format of the questionnaire was kept very simple in order to inspire meaningful participation of the respondents. To ascertain the content and face validity of the instrument, experts in the field of agricultural extension consisting of supervisors

and lecturers were consulted. Their comments were incorporated into the instrument. Cronbach Alpha Coefficient was used to calculate the reliability coefficient. A score of 0.787 reliability coefficient was obtained. This score was considered adequate [20].

### 2.3 Data Analysis

Descriptive analysis was used to reduce the data into a summary format through tabulation and measure of central tendency (mean and standard deviation). The use of descriptive statistics was intended to characterize the variables. Inferential statistics were also utilized to aid in the development of hypotheses about a condition or event. It enables you to make conclusions based on extrapolations, which distinguishes it from descriptive statistics, which simply report the data that has been measured. Paired correlations and the paired t-test are two inferential statistics that are utilized.

### 3. RESULTS AND DISCUSSION

The results are displayed in Table 1.

The findings show that majority of the respondents, (86%) were either positive or very positive towards financial transparency before devolution as opposed to the only 4.3% after devolution. These results suggest that transparency in financial matters of extension services before devolution was far much better compared to before devolution. The findings show that 74.2% (51.6%+22.6%) of the respondents' attitude, towards the participatory nature of the budget process before devolution, was positive and very positive. However, the majority (68.8% i.e.33.3%+33.5%) of the respondents' attitude towards the nature of the budget process, after devolution, was negative and very negative. This is a clear indication that the process of budgeting before devolution was participatory as opposed to the current state of

**Table 1. Perceptions of agricultural staff towards financial support for extension services**

Statements		Very Negative (1)	Negative (2)	Somehow Positive (3)	Positive (4)	Very Positive (5)	Mean	SD
There is transparency in financial matters of extension services	<b>Before</b>	0	4.3%	9.7%	62.4%	23.7%	4.05	0.713
	<b>After</b>	29%	45.2%	21.5%	4.3%	0	2.01	0.827
Budgeting process in the County is participatory	<b>Before</b>	8.6%	10.8%	6.5%	51.6%	22.6%	3.69	1.189
	<b>After</b>	33.3%	35.5%	18.3%	10.8%	2.2%	2.13	1.066
The money allocated to agricultural extension services is sufficient	<b>Before</b>	3.2%	5.4%	26.9%	30.1%	34.4%	3.87	1.055
	<b>After</b>	57.0	37.6%	5.4%	0	0	1.48	0.601
There is timely disbursement of money towards agricultural extension in the County	<b>Before</b>	5.4%	5.4%	23.7%	46.2%	19.4%	3.69	1.021
	<b>After</b>	45.2%	40.9%	6.5%	7.5%	0	1.76	0.877
Financial accountability is evident in Kericho County	<b>Before</b>	0	4.3%	29.0%	46.2%	20.4%	3.83	0.802
	<b>After</b>	26.8%	31.4%	34.5%	7.3%	0	2.23	0.934

devolution. Brewer et al. argued that the source of funding is an important part of financial analysis as it contributes to service delivery in the agricultural sector [21].

Further, results showed that 64.5% of the respondents (30.1%+34.4%) attitude towards the money allocated to agricultural extension services was positive and very positive before devolution. However, 94.6% (57.0%+37.6%) of the respondents' attitude towards the same variable was negative and very negative after devolution. This could imply that the budgetary allocation to agricultural extension, after devolution, has been insufficient. This agrees with that found that local governments in Uganda depend heavily on subventions from Central Government to finance agricultural extension services [17]. Similarly, A study found that although the Department of Agriculture (DOA) is devolved, it relies on the central government to fund its activities [15].

The results also showed that 65.6% of the respondents' attitude towards timely disbursement of funds for agricultural extension in the County before devolution, was either negative or very negative. This could be an indication that disbursement of money towards agricultural extension in the County was timely before devolution. Another study found similar results in a scoping study in the Ga West Municipal Assembly and the Shai-Osudoku District Assembly of Ghana [16]. The study reported that not only are funds released late, they also fall short of the budgeted funds of the DOA.

Moreover, the results also revealed that a majority (66.6%) of the respondents' attitude towards financial accountability, in Kericho County was positive and very positive before devolution. However, 58.2% (31.4+26.8) of the respondents' attitude towards the same variable was negative and very negative after devolution. The findings suggest that financial accountability was better before devolution. The findings agree with Saeed et al. [22] who investigated the impact of devolution on the agricultural extension system in Pakistan. The study found out that Agriculture Officers and Deputy District Officers are not involved in financial transactions and that only the District Officer of Agriculture and District Officers deal with financial matters. Agriculture Extension budgets have been reduced by up to 25% to 30% in the wake of devolution, according to DDOs and district officers. They stated that

prior to devolution, they had quarterly budgets, but now they receive monthly budgets which cause challenges in utilizing funds in different departments and makes managing demonstration plots difficult.

### 3.1 Inferential Analysis of Perception towards Funding and Agricultural Extension Services

This section describes the correlations and comparison of means pertaining to perception of agricultural extension staff towards funding and agricultural extension services.

The p-value reflects the level of relationship between the independent and dependent variables in statistical significance testing. If the found significance value is smaller than the critical value, which is statistically preset at 0.05, the model is considered significant in explaining the association; otherwise, it is considered non-significant. Table 2 indicates that the relationship between the statements, "there is transparency in financial matters of extension services before devolution and there is transparency in financial matters of extension services after devolution" was weak, negative, and statistically significant at 5% level of significance ( $r=-0.351$ ,  $p\text{-value}=0.001$ ). Similarly, the relationship between "Financial accountability is evident in Kericho County before devolution and Financial accountability is evident in Kericho County after devolution" was weak, negative, and statistically significant ( $r=-0.325$ ,  $p\text{-value}=0.001$ ).

On the other hand, the correlation between "Budgeting process in the County is participatory before devolution" and "Budgeting process in the County is participatory after devolution" was weak, negative, and statistically insignificant at 5% level of significance ( $r=-0.131$ ,  $p\text{-value}=0.211$ ). The results also indicate that the association between "The money allocated to agricultural extension services is sufficient before devolution and the money allocated to agricultural extension services is sufficient after devolution" was weak, negative, and statistically insignificant ( $r=-0.055$ ,  $p\text{-value}=0.602$ ). Likewise, the relationship between "There is timely disbursement of money towards agricultural extension in the County before devolution and there is timely disbursement of money towards agricultural extension in the County after devolution" was weak, negative, and statistically insignificant ( $r=-0.168$ ,  $p\text{-value}=0.107$ ). To compare the perception of agricultural extension

staff before and after devolution, the data were subjected to paired t-test. The results are depicted in Table 3.

The findings show that the paired mean differences between the statements are 2.043, 1.559, 2.387, 1.925 and 1.602 for pairs 1-5, respectively. The paired t-test results show that

all the pairs of statements show statistically significant differences. These results imply that the level of financial support before and after devolution in agricultural extension in Kericho County are different. This difference can be attributed to the changes in the system of governance from centralised system to devolved system.

**Table 2. Paired samples correlations**

		N	Pearson's Correlation	P-value (Sig.)
Pair 1	There is transparency in financial matters of extension services before devolution & There is transparency in financial matters of extension services after devolution	93	-0.351	.001 <sup>b</sup>
Pair 2	Budgeting process in the County is participatory before devolution & Budgeting process in the County is participatory after devolution	93	-0.131	.211
Pair 3	The money allocated to agricultural extension services is sufficient before devolution & The money allocated to agricultural extension services is sufficient after devolution	93	-0.055	.602
Pair 4	There is timely disbursement of money towards agricultural extension in the County before devolution & There is timely disbursement of money towards agricultural extension in the County after devolution	93	-0.168	.107
Pair 5	Financial accountability is evident in Kericho County before devolution & Financial accountability is evident in Kericho County after devolution	93	-0.325	.001 <sup>b</sup>

Note: Statistical interpretation:  $r > 0.7$ : strong correlation;  $r < 0.6$ : moderate correlation;  $r < 0.5$ : weak correlation, b: Correlation is significant at 0.05 level (2-tailed)

**Table 3. Paired samples t-test**

		Paired Differences			T	P-value (2-tailed)
		Mean	Std. Deviation	Std. error mean		
Pair 1	There is transparency in financial matters of extension services before devolution - There is transparency in financial matters of extension services after devolution	2.043	1.268	.131	15.543	.000
Pair 2	Budgeting process in the County is participatory before devolution - Budgeting process in the County is participatory after devolution	1.559	1.697	.176	8.861	.000
Pair 3	The money allocated to agricultural extension services is sufficient before devolution - The money allocated to agricultural extension services is sufficient after devolution	2.387	1.243	.129	18.525	.000
Pair 4	There is timely disbursement of money towards agricultural extension in the County before devolution - There is timely disbursement of money towards agricultural extension in the County after devolution	1.925	1.454	.151	12.767	.000
Pair 5	Financial accountability is evident in Kericho County before devolution - Financial accountability is evident in Kericho County after devolution	1.602	1.415	.147	10.917	.000

#### 4. CONCLUSION

The study concludes that the levels of financial support before and after devolution in agricultural extension in Kericho County are different. On perception towards funding and agricultural extension services, the findings revealed that an overwhelming majority of the respondents believed that financial support was better before devolution compared to after devolution. The study suggests that the county government of Kericho should improve their financial commitment to promote effective and efficient delivery of extension services. The national government should also release funds to the county governments on time to avoid delays in the delivery of extension services.

#### SUGGESTIONS FOR FURTHER RESEARCH

This study was done using quantitative methods. Future research should be done using qualitative methods for in-depth information and analysis in similar studies. Likewise, this study was conducted in Kericho County, further studies can be done in different counties to replicate the current study.

#### CONSENT

As per international standard or university standard, Participants' written consent has been collected and preserve by the author(s).

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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