

**FACTORS INFLUENCING DELIVERY OF EXTENSION SERVICES BY THE COUNTY GOVERNMENTS AFTER AGRICULTURAL SECTOR DEVOLUTION IN KITUI COUNTY, KENYA**

- 1 Kyambo, Onesmus \*; South Eastern Kenya university  
2. Dorothy Akinyi Amwata South Eastern Kenya University  
3. Julius Kilungo South Eastern Kenya University

\*Corresponding Authors: okyambo@seku.ac.ke Tel no. 0723225364  
damwata@seku.ac.ke Tel no. 07215999870  
jkilungo@seku.ac.ke Tel no. 0724999034

**ABSTRACT**

Agriculture is the main stay and driver of Kenyan rural economy. Despite the critical role of agriculture in Kenya, poor access to extension support services still persist. This study sought to determine the factors influencing delivery of extension services by the county governments after agricultural sector devolution as per the Constitution of Kenya (2010). The study used an *ex post facto* descriptive survey design. A total sample of 70 extension officers drawn from the population of 241 extension officers were selected from Kitui County using a stratified random sampling approach. Secondary sources of information such as county reports and existing literature were examined to complement the primary survey data. Questionnaires were administered to the sampled extension officers. Data analysis was carried out using descriptive, inferential statistics and linear regression. This study found that majority of extension officers reported inadequate performance in extension service delivery by the county government due to factors such as unavailability of transport, delayed salaries, lack of staff promotion, undefined duties with duplication, unfavorable and poor work environment and low facilitation for extension activities. This study recommends that for better extension service delivery in Kitui County, extension officers should be well facilitated through mode of transport, proper remuneration and timely promotions. Greater support and budget should be directed to the devolved agricultural extension services as a way of improving agricultural productivity and increasing farmers' incomes.

**Key words:** *devolution, extension services, constitution, delivery, factors*

## **1. Introduction**

### **1.1. Background to the Study**

Agriculture is the means of livelihood and the main frame of rural life in developing countries (World Bank, 2021). Agriculture contributes approximately 30 percent to the Gross Domestic Product (GDP) in sub-Saharan Africa. It is estimated that more than 90 percent of the rural population depends on rain-fed agriculture for income and food in developing countries. Agriculture sector contributes about 40 percent of the GDP and provides livelihoods to about 80 percent in East Africa (IFPRI, 2004; Amwata, 2020). In Kenya, approximately 75 percent of rural population agriculture is rain-fed and implemented mainly for subsistence. Agriculture sector accounts for 30 percent of GDP and 80 percent of the national rural employment (GOK, 2010). Agriculture Sector Growth and Transformation Strategy (GOK, 2019) holds that agriculture is a key source of livelihood and a vehicle for steering economic growth in Kenya and sub-Saharan Africa.

Agriculture sector is one of the economic pillar of the Kenya Vision 2030 and the Big Four Agenda. Following the Constitution of Kenya (2010), agriculture functions in Kenya were devolved. The sector has direct implications on two critical areas of the country economy, namely food security and employment creation, thus impacting on poverty incidence levels, health of Kenyans and the overall quality of life. Therefore, it is paramount that the devolution in the sector takes into consideration the above mentioned challenges and seizing any opportunity that can promote improved productivity of the agriculture sector (MOALF, 2017).

Agricultural extension is a key to improving agricultural productivity in Kenya. The term 'agricultural extension' is contextualized here to mean the entire set of organizations that support and facilitate people engaged in agricultural production to solve problems and to obtain information, skills and technologies to improve their livelihoods and well-being (GOK, 2012). This can include different governmental agencies, private sector actors, Non-Governmental Organizations (NGOs), producer organizations and farmer organizations. Extension was originally conceived as a service to 'extend' research-based knowledge to the rural sector in order to improve the lives of farmers.

Prior to ushering in the devolved government in 4<sup>th</sup> March 2013, the agriculture sector had been managed in at least ten (10) separate sub-sectors namely crops, livestock, fisheries, land, water, cooperatives and marketing, environment and natural resources, regional development; and development of arid and semi-arid land (ASAL). With the enactment of the Kenyan Constitution in the year 2010, agricultural sector particularly extension service was devolved to lower administrative levels in order to take the services closer to people and ensure effective service delivery (GOK, 2011).

In order to harness the productivity and growth of the sector, the national and county governments need to perform their functions in line with the functional and institutional integrity of government at these two different levels. This was achieved through consultation between the two levels and liaison in exchange of information, coordination of policies and enhancement of capacity. However, clarity of roles of each of the stakeholders are critical for coordination.

### **1.2 Statement of the Problem**

Empirical evidence supports the existence of a relationship between decentralization and service delivery (Ahmad et al., 2008; Besley et al., 2007; Freinkman & Plekhanov, 2009; Kannan, 2013). However, these studies focus mostly on developed or developing countries of Asia and Latin America. The link between devolved governance with administrative decentralization and

agricultural extension service delivery in the context of sub-Saharan Africa is scarcely explored. To date, only few studies have evaluated the factors of decentralization on service delivery in the context of Sub-Saharan Africa (Balunywa et al., 2014; Tshukudu, 2014). Of great interest to this study is the fact that across the multiplicity of agricultural extension service providers in Kenya, the overriding problem is inadequate local stakeholder consultation in developing and designing the extension programs. The purpose of this paper is therefore to investigate the factors influencing delivery of extension services in Kitui County.

### **1.3 Objective of the Study.**

The specific objective of the study was to determine the factors influencing delivery of extension services by the county governments.

### **1.4 Hypothesis**

The following hypothesis guided the study

Ho: There are no significant factors influencing the delivery of extension services by the county governments after devolution.

### **1.5 Significance of the Study**

Extension officers will have more clear structure, to prioritise and facilitate their operations and to deliver farmer tailored services based on real farmer's needs.

## **2.0 Factors Influencing Delivery of Extension Services by the County Governments**

Agricultural extension in the Counties comprises of employees from Central Government having different terms of service. The main objective of this government is to render better and quality services to the residents of counties but the services have been compromised due to the fear of the unknown over their job security leading to high employee's turnover, absenteeism and low morale. According to Kirkpatrick (2011), people may resist, welcome or have a mixed feeling towards change. This resistance is based on the fact that they might lose something including a personal loss.

Kotters (1996) suggests that successful change of any magnitude should go through all the eight steps of his model. Establishing a sense of urgency is very crucial step to enable employees is driven out their comfort zones, but after the devolved system makes most of the employees tend to work in fear and anxiety because their future is unknown. According to Myrna (2009), change means acquiring new skills as well as new ways of thinking and behaving which the Government has failed to provide training and coaching to enable everyone to change effectively. Inadequate information on devolution and the roles of county governments and the elected representatives among the citizens is a worrying concern. Hence need for civic and political education is great and that could be an area of engagement too.

Despite of the National Government in conjunction with SRC efforts reviewing of allowances in the public services through several periodic circulars Ref. SRC/ADM/CIR/1/13 Vol. III, still panicking among the employees is still lingering in their minds making them to always expect the worse outcome hence leading to low performance. Most of the transferred and devolved employees have not taken this change in a positive way because issues such organizational structures, values and cultures were not addressed appropriately by the Transition Authority to Devolved Government Act, 2012 which was mandated to spearhead this process.

According to Retirement Benefit Act No.3 of 1997 stipulates that organizations should submit both employer and employee contributions to the relevant statutory body. Machakos, Kitui and Makueni Counties Government employees are not aware of what will happen to their contributions made towards the existing pension schemes. The newly recruited personnel are in dilemma in choosing among the existing pension schemes because the county Provident Fund is yet to be constituted. The Public Finance Management Act 2012 is mandated to provide guidance on disbursement of revenue to the 47 counties. However, due to National Treasury delay in disbursement of funds and inadequate funding, According to the study Christopher et al., (2013) the ability of counties, especially those with a weak resource base to raise enough revenues that will enable them perform the devolved functions and deliver services to the citizen. The equalization fund is likely to be so thinly spread hence the bigger burden of meeting the deficits will have to be through internal revenues. This is particularly as relates to the already weak capacities to generate and collect revenues that were witnessed in the former Local Government Units. Thus, this study seeks to evaluate the factors that influence the delivery of extension services by the county government of Kitui after devolution.

## **2.2 Employees Training**

Training and Development has a direct relationship with effectiveness of the devolution of counties in Kenya. When the agricultural extension agents are well trained and thoroughly developed they will deliver the agenda of their respective county Governments and hence there exists this kind of relationship. Training may however be defined as the action of teaching a person or animal a particular or type of behaviour or may be defined as a learning process that involves acquisition of knowledge, sharpening of skills, concept, rules, or changing of attitude and behaviour to enhance the performance of employees. According to Kurt (2004) an individual's behavior is a function of the group environment, or 'field'. The field produces forces, tensions, emanating from group pressures on its members.

According to the Group Dynamics School, the focus of change must be at a group level and should concentrate on influencing and changing the group's norms, roles and values. Myrna (2009) says effective training is not an isolated event in an organisation. Training must be strategic in that it is designed to improve the knowledge, skills and abilities of employees to help them achieve the organisation's strategic plan. Effective training is therefore can't be designed until there is full understanding of the organisation. Training is an important tool of agricultural extension agents to control the attrition rate because it helps in motivating employees achieving their professional and personal goals, increasing the level of job satisfaction thus leads to increased productivity. He further reiterates that it can only be achieved through SWOT Analysis and a proper understanding of the organization's vision and hence creating a competitive advantage. Training Needs Analysis is also very important to know the training gaps between the employee's current performance and desired performance level According to Sean (2010), training on the other side helps to identify and grow the personality and performance strengths that will make the organization's employees better and getting right person in the right job. Continuous training keeps employees at the cutting edge of industry developments.

## **2.3 Employees Motivation**

Among financial, economic and human resources, the latest are more essential and have the capability to endow a company with competitive edge as compared to others (Rizwan et al.,2010). Employee performance fundamentally depend on many factors like performance appraisals,

employee motivation, Employee satisfaction, compensation, Training and development, job security, Organizational structure and other, but the area of study is focused only on employee motivation as this factor highly influence the performance of employees. Employee motivation is one of the policies of managers to increase effectual job management amongst employees in organizations (Shadare et al., 2009).

A motivated employee is responsive of the definite goals and objectives he/she must achieve, therefore he/she directs its efforts in that direction. Rutherford (1990) reported that motivation formulates an organization more successful because provoked employees are constantly looking for improved practices to do a work, so it is essential for organizations to persuade motivation of their employees (Kalimullah et al., 2010). Kalimullah et al (2010) further cites that research that reward causes satisfaction of the employee which directly influences performance of the employee. Rewards are management tools that hopefully contribute to firm's effectiveness by influencing individual or group behavior. All businesses use pay, promotion, bonuses or other types of rewards to motivate and encourage high level performances of employees (Reena et al., 2009). To use salaries as a motivator effectively, managers must consider salary structures which should include importance organization attaches to each job, payment according to performance, personal or special allowances, fringe benefits; pensions and so on (Adeyinka et al., 2007).

#### **2.4 Availability of Funds**

Kenya is a signatory to the 2003 Maputo Declaration that commits nations to fund the agricultural sector at a minimum of 10 percent of their national budget. However, even though the funding to the sector has increased over the years, the share to national resources has been declining (Amwata, 2020). The total development budget in the sector has also been increasing from early 2000s. The constitution allows for a transition period of three years from the date of promulgation August 2010, when it is expected that the national government will have transferred all the functions listed in the fourth schedule to the county governments. After the general elections in March 2013 county governments took office and have been establishing the requisite departments to take charge of the specified functions.

From 1st July, 2013 county governments took over all the functions as listed in the fourth schedule of the constitution with the exception of a few as had been agreed by the Summit. The constitution requires that a minimum of 15 percent of the national revenue be allocated to county governments. In the 2013/14 financial year, above 40 percent of the national revenue was allocated to county governments. Although this is a substantial amount, the sentiments expressed by the governors are that it is not enough given the huge expectations that they face. The analysis of the printed budget estimates for the 2013/14 financial year submitted to the Controller of Budget by the county governments, paying attention to the development expenditure allocated to the agriculture sector. Key concerns at the county level include whether the agricultural sector has been prioritised by the counties and the implications of allocations on implementation of activities in the sector, and the continuity of on-going programs by the state departments

Revitalizing the sector at the county level will start by optimizing production. There are a number of initiatives that were started by the ministries aimed at achieving this. Many of these programs and projects now fall under the mandate of the county government. In the 2013/14 financial year, county governments allocated a total of Ksh.11 billion as development expenditure for the sector. This was less than half of the Ksh.26 billion allocated to the sector in 2012/13 financial year before

devolution. The average share of development expenditure to total expenditure by counties for the infrastructure sector was 14 percent, compared to four and two per cent for the agriculture and trade sectors respectively. Thus, majority of the counties allocated a huge share of their development expenditure to infrastructure. This is not unexpected given that many of the roads in rural areas are in poor condition and are usually impassable during the rainy season (Njagi, Kirimi, Onyango, & Kinyumu, 2014)

### 3.0 Research Methodology

The study used an *ex post facto* descriptive survey design. This design is appropriate for the study because it enables the description and exploration of the effect of devolution of agricultural sector on the delivery of extension services in the selected study area. This type of design involves data collection after a naturally occurring event. It involves collection of information from a sample that has been drawn from a population that has received a natural treatment not designed by researcher (Fraenkel, Wallen, & Hyun, 2012). The study attempts to describe the factors that affect the devolution of extension service.

The population under study comprised of extension officers in Kitui County. The accessible population was all the extension officers in Kitui County region who here by form the accessible population for the study.

Sample size determination

$$S = \frac{N(CV)^2}{(CV)^2 + (N-1)e^2}$$

Note:

S=sample size;

N=population size;

CV=Coefficient of variation which is  $\leq 30\%$ ;

e=marginal of error which is fixed between 2-5%).

The study sample was calculated at 20 percent coefficient of variation and 2 percent margin of error (Nassiuma, 2000). Twenty percent coefficient of variation was used to ensure that the sample was wide enough to justify the results being generalised for the Kitui County. Higher coefficients of variation were not used to avoid very large samples due to limitation of research funds. Two percent margin of error was used because the study was an ex-post facto survey, whereby the independent variables could not be manipulated hence necessitating relatively higher margin of error.

A calculated sample size of 70 respondents from the population of 241 extension officer was selected from Kitui County using stratified random sampling approach. This sample size of 70 extension officers provides a reasonable sample for subsequent sound data analysis. An extra number of 11 extension officers were necessary to cater for natural attrition

A questionnaire was designed and used as the main instrument of data collection for extension officers in Kitui County.

Upon receiving authority letter from Graduate School of South Eastern Kenya University and a research permit from the National Commission for Science, Technology and Innovation (NACOSTI), field work was initiated to collect relevant data for this study.

The collected data was exported into STATA program version 16.0 for subsequent analysis. Before the actual analysis, data was cleaned of any outliers and entry errors. In this study, descriptive and inferential statistics through econometric models were used to analyze data. The inferential statistic modeling, linear regression were used

#### 4. Results

##### Age of the sampled extension officers

The results of the study indicate that 44.3% had 40 years of age and below while 55.7% have 41 years and above.

Table 4.1: Age of the sampled extension officers

Age bracket (Years)	Frequency	Percentage	Cumulative %
21-30	10	14.3%	14.3%
31-40	21	30.0%	44.3%
41-50	13	18.6%	62.9%
Above 51	26	37.1%	100.0%
Total	70	100.0%	

This indicates that the extension service in Kitui County is balanced in terms of age distribution. It is therefore imperative that extension services may be effective since there are old officers with experience and young who can learn from the old.

##### Gender of the respondents

The results of the survey shows a higher number of male agricultural extension workers (91.4%) compared to females (8.6%).

Table 4.2 Gender of the respondents

Gender	Frequency	Percent
Female	6	8.6%
Male	64	91.4%
Total	70	100.0%

This indicates that the extension service is dominated by male extension at 91.4 percent which may have implications on delivery of extension services and productivity. Women undertake majority of agricultural work in addition to domestic and reproductive roles. With more female engaged in agricultural activities, female extension workers may be more effective than male extension officers. Female inclusivity in the extension service enables a correct understanding of gender issues in agricultural practice and implications for equity, equality, social justice and productivity. Despite the gender gaps and challenges in the agriculture sector, the existing opportunities can be used to improve operational efficiency and achieve the expected impacts. This agrees with the findings of Akinsorotan & Oladele (2009) that ADP extension officers were mainly males and this may pose a challenge in gender equality in extension services.

### Level of Education of the Respondents

The results of this research indicate that majority of the sampled respondents (52.9%) had diploma from various colleges. About 44.3% of the respondents had bachelor's degree while the remaining 2.9% had master's degrees.

Table 4.3: Education background of the sampled extension officers

Level of education	Frequency	Percent
College	37	52.9%
University level	31	44.3%
Master	2	2.9%
Total	70	100.0%

### Working experience of the sampled extension officers

The survey shows that 67.1% of the respondents had working experience of 20 years and below and 33.9 % had 21 years and above.

Table 4.4: Working experience of the sampled extension officers

Age bracket (Years)	Frequency	Percentage	Cumulative %
1-10	35	50.0%	50.0%
11- 20	12	17.1%	67.1%
21-30	14	20.0%	87.1%
Above 31	9	12.9%	100.0%
Total	70	100.0%	

It is argued that working experience is an important ingredient of professional performance and could be a key factor in effective service delivery in the devolved extension system.

Table 4.5: Influence of selected factors on delivery of devolved extension services

Delivery of extension services	Coef.	SE	Z	P-value
Availability of transport for extension services	1.53	0.60	2.54	0.011
Availability of housing facility for extension staff	1.47	0.89	1.66	0.097
Timely payment of salaries for extension officers	2.15	0.57	3.75	0.000
Proper promotion for extension officers	1.56	0.49	3.16	0.002
Fair and transparent transfers	1.52	1.27	1.2	0.228
Well outlined duties with no duplication	1.76	0.55	3.18	0.001
Favorable and conducive work environment	2.31	1.05	2.19	0.028
Increased facilitation for extension activities	2.93	0.74	3.96	0.000
Increased training and capacity building for extension staff	1.57	0.82	1.92	0.055
Constant	1.93	0.47	4.11	0.000

Calculated Chi2 (9) = 30.04, Critical Chi2 (9) = 16.92; Prob>Chi2 = 0.000; Adj R<sup>2</sup> = 0.264



Results in Table 4.5 reveal that all coefficients were statistically significant at 5 percent level except for availability of housing facility for extension staff, fair and transparent transfers and increase in training and capacity building for extension staff.

The calculated likelihood ratio Chi square at nine degrees of freedom (30.04) for the fitted model with a probability value of 0.000 was significant at 5 percent level (Critical  $\chi^2(9) = 16.92$ ). The adjusted  $R^2$  of 0.264 was above the statistical threshold of 5 percent confirming that delivery of extension services was significantly influenced by selected factors. It further implies that selected factors collectively account for about 26.4 percent of the variance in delivery of extension services, other factors notwithstanding.

The coefficients for availability of transport for extension services (1.53) was positive and statistically significant at 5 percent level ( $P < 0.05$ ). This implies that increased availability of transport for extension services is attributed to better delivery of extension services.

The coefficients for timely payment of salaries for extension officers (2.15) was positive statistically significant at 5 percent level ( $P < 0.05$ ). This implies that timely payment of salaries for extension officers is attributed to better delivery of extension services.

The coefficients for proper promotion for extension officers (1.56) was positive and statistically significant at 5 percent level ( $P < 0.05$ ). This implies that proper promotion for extension officers is attributed to better delivery of extension services.

The coefficients for well outlined duties with no duplication (1.76) was positive and statistically significant at 5 percent level ( $P < 0.05$ ). This implies that a well outlined duty with no duplication is attributed to better delivery of extension services.

The coefficients for favorable and conducive work environment (2.31) was positive and statistically significant at 5 percent level ( $P < 0.05$ ). This implies that favorable and conducive work environment is attributed to better delivery of extension services.

The coefficients for increased facilitation for extension activities (2.93) was positive and statistically significant at 5 percent level ( $P < 0.05$ ). This implies that increased facilitation for extension activities is attributed to better delivery of extension services.

#### **4. Discussion**

The results of the study are consistent with Tladi-Sekgwama (2019) who found that effective delivery of agricultural extension services is constrained by four groups of factors: physical, administrative, extension worker related and farmer related.

The findings of this study agrees with Machiadikwe, Benjamin & Nnenna (2016) who found that timely payment of salaries for extension staff is a key motivation factor in their career. In their study, lack of impressive performance of extension delivery in research-extension-farmer linkage activities in the study area, was attributable to poor motivation of extension staff due to low salaries that were not timely.

Mwangi & McCaslin (1994) found that proper promotion of agricultural extension staff is a key determinant to service delivery. In their study on satisfaction factors related to motivation of a random sample of 325 agents in Kenya's extension service in the Rift Valley Province.

Well outlined duty with no duplication is attributed to better delivery of extension services. This study agrees with MoALF (2018) that found that success in execution of extension functions by both county and national governments has been largely elusive due to poor coordination mechanisms that is characterized by high duplication of responsibilities.

Favorable and conducive work environment is attributed to better delivery of extension services. This study is consistent with Mwangi & McCaslin (1994) who found that work environment that is conducive to extension staff was a key motivation factor to increased performance of extension agents in Rift valley province of Kenya. In their findings, a work environment that is characterized by good allowances and health insurance were important for motivating agents.

Increased facilitation for extension activities is attributed to better delivery of extension services. This study agrees with Harvey (2021) who found that long-term consistency in government programming in extension service delivery was a key to sector momentum and imitation.

## **5. Conclusions**

An overwhelming majority of extension officers reported dismal performance in extension service delivery by the county government. Most therefore preferred to move to the national government if given a chance. Extension service delivery in the study area is influence by several factors such as availability of transport for extension services, timely payment of salaries for extension officers, proper promotion for extension officers, well outlined duties with no duplication, favorable and conducive work environment and increased facilitation for extension activities. This means that for better extension service delivery in Kitui County, extension officers should be well facilitated with transport, remunerated well and timely, promoted fairly, availed with well-outlined duties with no duplication and provided with a conducive work environment. Extension activities also need to be increased.

## **6. Recommendations**

In view of the findings and the conclusion drawn above, this study makes the following recommendations:

For better extension service delivery in Kitui County, extension officers should be well facilitated with transport, remunerated well and timely, promoted fairly, availed with well-outlined duties with no duplication and provided with a conducive work environment. Extension activities also need to be increased.

## **7. Acknowledgement**

I would like to singularly thank the Almighty God for giving me good health, sound mind and being with me every step of the way in the pursuit of knowledge and for guiding me as I undertook my studies and all activities associated with the completion of this thesis. I wish to acknowledge the South Eastern Kenya University for providing enabling environment for my study, A Sustainable Approach to Livelihood Improvement (ASALI) and National Research Fund for financially supporting my research work.

Furthermore, my gratitude goes to my supervisors, Dr. Dorothy A Amwata and Dr. Julius Kilungo and Prof. Mary Mburu who spared a lot of their time to guide me through this research study, the positive criticism and invaluable comments which has made this research a success.

## References

- Adeyinka T., Ayeni C.O. & Popoola, S.O. (2007). "Work Motivation, Job Satisfaction, and Organisational Commitment of Library, Personnel in Academic and Research Libraries in Oyo State, Nigeria" *Library Philosophy and Practice* (e-journal). Paper 118.
- Amwata D. A (2020). Situational analysis of the agriculture sector in Kenya. Ministry of Agriculture, Livestock and Fisheries. Nairobi, Kenya.
- Ahmad, E.M, Brosio, G & Tanzi, V. (2008). Local service provision in selected OECD countries: Do decentralized operations work better? Working Paper, No. 08/67. Washington, D.C: International Monetary Fund.
- Akinsorotan, A. O. & Oladele, O. I. (2009). Organisational values perceived as evident among extension agents of Agricultural Development Programme in Nigeria. *Journal of Agricultural Tropical Subtropics* 42(1):10-117
- Besley pande \$ Rao (2007). Can Labor Regulation Hinder Economic Performance? Evidence from India *Quarterly Journal of Economics*, 19(1), 91-134.
- Balunywa, W., Nangoli, S., Mugerwa, G. W., Teko, J., & Mayoka, K. G. (2014). An analysis of fiscal decentralization as a strategy for improving revenue performance in Ugandan Local governments *Journal of Research in International Business and Management*, 4(2), 28-36.
- Christopher R. Conley j, & Timothy G., (2013). "Learning about a New Technology: Pineapple in Ghana." *American Economic Review*, 100(1): 35-69.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to design and evaluate research in education* (8th ed.). New York: Mc Graw Hill.
- Freinkman, L, & Plekhanov, A. (2009). Fiscal decentralisation and the quality of public services in Russian regions. Working Paper No. 111.
- GOK, (Government of Kenya, 2010). Agriculture Sector Development Strategy: 2010-2020. <http://www.the-star.co.ke/news/article-118978/lets-get-devolution-right-agriculture#sthash.0jE3rQvt.dpuf>.
- GOK (Government of Kenya, 2011). 'Interim report of the task force on devolved government: A report on the implementation of devolved government in Kenya', Task force on devolved government (TFDG) consultation document.
- GOK (Government of Kenya) (2012), 'National agricultural sector extension policy (NASEP): Ministry of Agriculture; Ministry of Livestock and Fisheries Development and Ministry of Cooperative Development and Marketing, Government printers.
- GOK) Government of Kenya (2019). Economic surveys. Nairobi, KNBS. 2019 Kenya Population and Housing Census: Volume II.
- Harvey, S. (2021). 10 Lessons Learned for Facilitating an Inclusive Agricultural Market System. USAID Maximizing Agricultural Revenue and Key Enterprises in Targeted Sites (MARKETS II) project, Nigeria. Retrieved from <https://www.agrilinks.org/post/10-lessons-learned-facilitating-inclusive-agricultural-market-system>
- International Food Policy Research Institute (2004). Assuring food and nutritional security in Africa by 2020. [www.jsd-africa.com/js](http://www.jsd-africa.com/js) retrieved on 10<sup>th</sup> February 2018
- Kannan, G., (2013). Pricing and allotment in a sea-cargo supply chain with reference effect: a dynamic game approach. *Discrete Dynamics in Nature and Society*, 2013.
- Kallimullah, A. R., Yaghoubi, N. M., & Moloudi, J. (2010). Survey of Relationship Between Organizational Justice and Empowerment (A Case Study). *European Journal of Economics, Finance and Administrative Sciences*, 24, 165-171.

- Kirkpatrick, D. (2011). *Managing Change Effectively, Approaches, Methods and Case Examples*, Woburn, MA: Butterworth-Heinemann.
- Kotter J. P. (1996). *Leading Change*, Harvard Business School Press, Boston MA
- Kurt, L. M. (2004). Planned Approach to Change, A Re-appraisal. *Journal of Management Studies*, 41: 977–1002.
- MOALF (2017). *Agricultural Sector Development Support Programme Implementation Framework II*. Ministry of Agriculture, Livestock and Fisheries and the Council of Governors Secretariat, Nairobi, Kenya.
- MoALF (2018). *Agriculture, extension & extension coordination: Policy brief*. Retrieved from [https://static1.squarespace.com/static/5aa6a1a19d5abb87c61a1225/t/5beee9ad70a6ad0437b98284/1542384048365/policy\\_brief\\_100417.pdf](https://static1.squarespace.com/static/5aa6a1a19d5abb87c61a1225/t/5beee9ad70a6ad0437b98284/1542384048365/policy_brief_100417.pdf)
- Machiadikwe, N. Benjamin, A.N., & Nnenna V. (2016). Level of Extension Agents' Motivation and Effectiveness in Abia State, Nigeria. *International Journal of Scientific & Technology Research* Volume 5, Issue 04, 212-215.
- Mwangi, J.G. & McCaslin, N. L. (1994). Factors Related to the Motivation of Extension Agents in Kenya's Rift Valley Province. Summary of Research 76. [Washington, D.C.] : Distributed by ERIC Clearinghouse, <https://eric.ed.gov/?id=ED369921>.
- Myrna, G. (2009). *Recruitment and Selection, Hiring the right person*, SHRM, USA a. pp 3
- Nassiuma D. K. (2000). *Survey sampling: Theory and methods*. Njoro, Kenya: Egerton University Press.
- Njagi T, Kirimi L, Onyango K & Kinyumu, N. (2014). *An Analysis of Agricultural Sector Funding by County Governments*. Tegemeo Institute of Agricultural Policy and Development.
- Reena, A. & Shakil. A. (2009). The Impact of Reward and Recognition Programs on Employee's Motivation And Satisfaction, *International Review of Business Research Papers* Vol. 5 No. 4 June 2009 Pp.270-279.
- Rizwan, K.U. Farooq SU & Ullah MI (2010). The Relationship between Rewards and Employee Motivation in Commercial Banks of Pakistan. *Res. J. Int. Stud.* 14:37-52
- Rutherford, J. (1990). *The Third Space: Interview with HomiBhabha. Identity, Community, Culutre, Difference*. J. Rutherford. London, Lawrence and Wishart: 207-221.
- Sean, B.N. (2010). Automated duplicate bug report classification using subsequence matching IEEE 14th International Symposium.
- Shadare, O. A. & Hamed T. A. (2009). Influence of work motivation, leadership effectiveness and time management of employees' performance in some selected industries in Ibadan, Oyo State, Nigeria, *European Journal of Economics, Finance and Administrative Science*, vol. 1450-2887, no. 16, pp. 7-17.
- Shukudu, T. T. (2014). Decentralization as a Strategy for improving Service delivery in the Botswana Public Service Sector. *Journal of Public Administration and Governance*, 4(2).
- Tladi-Sekgwama, F.M. (2019). An overview of agricultural extension in Botswana and needed reforms. *Journal of Agricultural Extension and Rural Development*. Vol.11(3), pp. 67-77
- World bank, (2021) *Using mobile phones and social media to facilitate education and support for rural-based midwives in South Africa* World Bank. Washington, DC.