

# INFLUENCE OF DEVOLUTION PRACTICES ON FOOD SECURITY IN ARID AND SEMI-ARID AREAS: A CASE OF WEST POKOT COUNTY, KENYA

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**Abstract:** The persistent challenge of food insecurity is a growing global issue and indeed a human rights violation. The problem is more pronounced in the Least Developed Countries and mostly attributed to the high poverty levels and governance issues. This led to continued agitation for reforms, with the people preferring devolution. Kenya was not different as the clamor for good governance culminated into a new constitution in 2010 with devolution as its form of governance. The inhabitants of Arid and Semi-Arid Land areas were expected to benefit immensely from devolution as more resources were expected to reach the citizens and thereby address the region's perceived isolation and marginalization by former governments. West Pokot is among the twenty three (23) counties in the Arid and Semi-Arid Land and was expected to be food secure yet this is not the case despite adequate resources and agriculture as a function having been devolved. The purpose of the study was to examine the influence of Devolution Practices on food security in Arid and semi-Arid areas in reference to West Pokot County. The specific objectives that guided this study were: to establish the influence of devolution practices on food security in West Pokot County; to determine the influence of governance practices on food security in West Pokot County; to establish the influence of county government strategies on food security in West Pokot County and to determine the influence of public participation on food security in West Pokot County. The study was anchored on the following theories; Theory of Performance, Stakeholder Theory and the Capability Theory. The study adopted a descriptive research design. Simple random sampling method was used in the study to select the sample size of 360 respondents from the target population of 3,508 respondents. Data was collected using structured questionnaires. Once ascertained, data duly collected was analyzed using the Statistical Package for Social Sciences version 23, interpreted and inference made according to the study objectives. The multiple regression and correlation analyses were used in establishing the relationship between the dependent and independent variables. The findings revealed a statistically significant regression effect among the variables. The F test was used to predict the dependent variable ( $F = 12.774$ ), which was greater than the 5% significance (critical or table value) which indicated an overall statistically significant model with Devolution Practices explaining 68.0% (at  $t \sim 2.391$ ) of Food Security, Governance Practices 70.9% (at  $t \sim 1.330$ ) of Food Security, County Government Strategies 57.2% ( $t \sim 1.312$ ) of Food Security, and Public Participation 58.5% (at  $t \sim 2.413$ ) of Food Security in West Pokot County. The predictor variables depicted Governance Practices with the highest influence on Food Security at 70.9% while County Government Strategies had the least influence at 57.2% compared to other study variables. This study was significant to the county, national governments, institutions and non-state acting organizations. The research contributed to the knowledge on devolution and food security in Kenya and internationally since the reviewed literature did not show any work done on impact of devolution on food security in county governments.

**Keywords:** Devolution practices, government practices, public participation, county government strategies and food security in arid and semi-arid land.

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## 1. INTRODUCTION

### Background of the study

The persistent challenge of food insecurity is a global issue (WFP, 2018) and based on (UN-UDHR, 1948) article 25 continued exposures is a cruel form of human rights violation. Severe food insecurity has been on the rise at global level (Recha, 2018) exacerbated by a host of factors among them; poverty, governance, climatic extremities and price spikes. The causes show the complexity of the global, regional and local level food systems and the need for proposed responses to go beyond agriculture and household levels (IFPRI, 2012). In August of 2010, Kenya embraced a new system of governance which involved the devolution of power, resources and embracing of the concept of public participation as its new and critical components (GOK, 2010). This implied a shift in the roles of national and county governance towards the achievement of food security. Around 3.4 million Kenyans are severely food insecure while 390,000 have been internally displaced due to food insecurity and drought (Welborn, 2018) majorly in ASAL counties. Devolution proponents opine that it encourages the much needed wider participation of the local population in the decision making process at the local level (Ikechukwu and Elnwa, 2015). Therefore it should offer an appropriate institutional response to the evolving risk of human food insecurity.

### Global Perspective on Food Security

Globally, Food crisis have become unfathomable leading to severe cases of hunger in the world especially in the LDC's. The world's undernourished rate stands at 11% affecting a total of 821 million people up from 8.9% representing 739 million people with Africa 20.4%, Asia 11.4%, Oceanic 7.0% and America contributing 6.1% respectively (County council of research, science and technology, 2017). The world prevalence of severe food insecurity was at 8.9% in 2014 and 10.2% in 2017 with the continents rates being; Africa 29.8%, Asia 6.9%, America 9.8% and Europe 1.4% (County council of research, science and technology, 2017). In the Philippines fast-paced population growth, poverty, and slow economic growth represent some of the underlying causes of food insecurity (Edralin and Collado, 2005). Almost one in seven people around the world are chronically hungry, lacking enough food to be healthy and lead active lives (GOK, 2017). Today more than 800 million people around the world suffer from chronic hunger and about 2 billion from under-nutrition (FAO, 2018). This failure by humanity is challenged in UN Sustainable Development Goal (SDG) no. 2: "End hunger, achieve food security, improve nutrition and promote sustainable agriculture (Recha, 2018).

Devolution has been seen by its proponents as a way of improving access and efficiency in the delivery of services to the people since the decisions are made close to the people, hence decision makers are more accountable to them (WB, 2012). In theory, decentralization creates downward accountability mechanisms which should motivate politicians to provide public services more efficiently (Cornell and D'Arcy, 2016). Devolution is the best agencies for generating motivation and encouraging mobilization for self-help. It encourages the much needed wider participation of the local population in the decision making process at the local level (Ikechukwu and Elnwa, 2015). Decentralized governance was one of the Governments of the Philippines' best legislative initiatives in 1991 as it bestowed on the LGU's the empowerment they had long needed to spur development in the country side. It also took away the long circuitous route that had prevented the swift flow of authority from the bureaucratic offices of the central government to the LGU's, NGOs, and community based organizations tasked to implement programs (Edralin and Collado, 2005). Devolution was therefore an appropriate institutional response to the evolving risk of human food insecurity.

A study conducted by Josefa and Collado (2005) in Bulacan province in Malaysia to assess whether devolution process had helped improve food security in the province documented strong points and positive outcomes of devolution from the perspective of the LGU's and their rural communities. Other countries worthy benchmarking are Indonesia, Peru and Ecuador as they operate through decentralized governance with good lessons to share on food security and nutrition (FAO, 2017). The arguments affirm that indeed devolution brings resources, power, instruments and decision making processes closer to the people so that they can actively participate in development processes and of course it has a positive role on food security.

### Regional Perspective of Devolution on Food Security

In Africa according to (Kauzya, 2007), she asserts that in terms of public administration, historically, African countries experienced fused, personalized and highly centralized governance systems and practices. Moyo (2014) opines that

dictatorship and continued human rights violation saw a heightened period of political activism that agitated for decentralized delegation of power to lower local government. Different African countries have decentralized their governance (Ndegwa, 2002) which embodies several concepts like devolution, decentralization, delegation and delocalization. Countries in Africa which have adopted devolution in their governance are South Africa, Kenya, Uganda and Nigeria. Each country has focused on a system of devolution that suits its unique context. For example Uganda's decentralization was born from the logistics of searching for guerilla war and need to introduce grass root participatory democracy while in South Africa an offspring of the struggle to dismantle apartheid (Juma, Rotich and Mulongo, 2014). Moyo, (2014) castigates a centralized system and says "It's quite clear the current system of highly centralized state as in Zimbabwe has promoted autocracy, inefficiency, corruption and exclusion of people from full participation on how they are governed. Devolution addresses most of this issues if well implemented.

Today a fifth of Africans are undernourished, representing a staggering 257 million individuals (FAO, 2017). Food insecurity has worsened in countries affected by poor governance, often exacerbated by drought or floods especially in Southern and Eastern Africa. Sub Saharan Africa has become a home to more than a quarter of the worlds undernourished, 38 million hungry people (SOFI, 2014). Nigeria records a lower value in terms of prevalence of undernourishment, food security and number of undernourished people in the Sub Saharan Africa thus fairly food secure compared to other African countries and devolution is its form of governance.

### Local Perspective of Devolution on Food Security

In Kenya, food consumption is outpacing food production and annual agricultural production will need to increase by an estimated 75% from 2015 levels in order to meet consumption in 2030 (Welborn, 2018). A survey carried out by AWSC in collaboration with KNBS in 2015 to establish the status of food security in the country, had its key research finding that; on average 18 per cent, which translates to 7.1 million Kenyans are chronically food insecure, being either often or always hungry. The findings further show that ASAL's are the worst hit in terms of hunger (AWSC, 2015). Around 3.4 million Kenyans are severely food insecure while 309 000 have been internally displaced due to food insecurity and drought (Welborn, 2018). Large swathes of Marsabit and Turkana counties have reached 'crisis' levels of hunger, according to the (IFSPC, 2018), and are increasingly vulnerable to 'emergency' levels (Welborn, 2018). This is one step away from famine. In August of 2010, Kenya embraced a new system of governance which involved the devolution of power, resources and embracing of the concept of public participation as its new and critical components (GOK, 2010). This implied a shift in the roles of national and county governance towards the achievement of food security. Kenyan constitution 2010, article 43(1) (c) states categorically that "every person has a right to be free from hunger and to have adequate food of acceptable quality" (Republic of Kenya, 2010). The Arid and Semi-Arid Lands (ASALs) make up more than 40% of the earth's surface and are home to 35% of its population (David and Gatua, 2013). In Kenya, the ASAL counties are 23 and occupy 89% of the country land mass and are home to about 14 million people and approximately 70% of the national livestock herd (Centre for sustainable dry land ecosystems and societies, 2016). The defining feature of the ASALs is their aridity. Annual rainfall in arid areas ranges between 150mm and 550mm per year, and in semi-arid areas between 550mm and 850mm per year (David and Gatua, 2013). The primary policy challenge is how to ensure food and nutrition security in a sustainable manner in environments that are prone to drought, where people's access to and control over critical livelihood resources such as land is insecure, and where unpredictability is set to increase as climate change takes hold (David and Gatua, 2013).

Devolution offers an opportunity to reach out to the people and promote a more balanced socio-economic development across the country (Njuguna, 2016). West Pokot is majorly a semi-arid region with a harsh environment and poverty levels at 57.4% (KNBS, 2017), which are usually exacerbated by the negative impact of climate change, insecurity at boarder points and over reliance on rain fed agriculture which increases its vulnerability leading to chronic emergence response driven by high food insecurity and acute malnutrition rates. Food insecurity prevalence has contributed to unacceptably high levels of stunting rate at 45.9%, underweight 38.5%, wasting at 14.3% and malnutrition rate at 15.3% above the global spheres emergency threshold of 15% (County council of research, science and technology, 2017). This justifies the researcher's choice and need to assess the county government instruments to establish why the continued persistence despite colossal amounts of resources, functions and powers having been devolved.

### Statement of the Problem

This study was motivated by the realization that, the world prevalence of severe food insecurity rate stood at 8.9% in 2014 and at 10.2% in 2017, with continental percentages being; Africa 29.8%, Asia 6.9%, America 9.8% and Europe 1.4% respectively. A third of Africa's population is severely food insecure representing 374.9 million people (FAO, 2018) while Sub Saharan Africa has more than a quarter of the worlds undernourished and 38 million hungry people (SOFI, 2014). Kenya is among the 45 countries out of 119 countries ranked in the world as food insecure (IFPRI, 2012). Around 3.4 million Kenyans are severely food insecure while 390, 000 have been internally displaced due to food insecurity (Welborn, 2018). Arid and semi-arid lands (ASAL) make up more than 40% of the Earth's surface with 35% of its population (David and Gatua, 2013). In Kenya, the ASAL counties are 23 and occupy 89% of the country's land mass with about 14 million people (David and Gatua, 2013). 10 people died of hunger related complications and 2.7 million Kenyans were living in desperate conditions while 14.7 million were in need of food aid in ASAL areas (Imenda, 2019) in March 2019, this paints a grim picture of lack of sustainable county government interventions on food security despite devolution having been in existence since 2013. According to the County council of research, science and technology (2017), West Pokot county food insecurity has unacceptably high levels of stunting rate. Devolution ought to offer an opportunity to promote a more balanced socio economic development across the County (Njuguna, 2016). The purpose of this study, therefore, was to assess the influence of devolution practices in arid and semi-arid areas in Kenya, particularly West Pokot County in regard to food security and determine appropriate ways of making it food secure.

### Objective of the Study

#### General objective

The general objective of this study was to assess the influence of devolution practices on food security in West Pokot County, Kenya.

#### Specific objectives

The specific objectives that guided this study were as follows;

- I. To establish the Influence of Devolution Practices on Food Security in West Pokot County, Kenya.
- II. To examine the Influence of Governance Practices on Food Security in West Pokot County, Kenya.
- III. To establish the Influence of County Government Strategies on Food Security in West Pokot County, Kenya.
- IV. To evaluate the Influence of Public Participation on Food Security in West Pokot County, Kenya.

### Research Questions

The following were the study questions that guided this research:

- I. How does Devolution Practices Influence Food Security in West Pokot County, Kenya?
- II. How does Governance Practices Influence Food Security in West Pokot County, Kenya?
- III. How does County Government Strategies Influence Food Security in West Pokot County, Kenya?
- IV. How does Public Participation Influence Food Security in West Pokot County, Kenya?

### Significance of the Study

In many ways, this study was crucially significant to the following;

#### Leadership, Management and Staff of West Pokot County

Kenya as a country as well as the local and international stakeholders will benefit from this study as it will be a base for effective development, when utilized as a benchmarking tool and implementation of food policies in organizations. The research will contribute knowledge in the area of devolution and food security in Kenya and internationally. By

empirically analysing devolution dynamics in regard to food insecurity, this study anticipates that many Companies, institutions and individuals will benefit from the study's revelations.

### **County and National Government**

The research shall similarly be important in decision making processes by managers in county government, national government and non-state organizations and satisfy the stakeholders and citizens. The Kenyan Government and other East African countries will benefit by use of this study results as a knowledge transfer base on food security policies.

### **Researchers**

Future Researchers and higher learning institutions will benefit immensely as this Study will be one of the current collection of insightful information on devolution and food security. The research will also spur other academicians having an interest in this area as it will be one of the references during their academic pursuits.

### **Scope of the Study**

The scope of the study geographically, was done within West Pokot County, Kenya. On content scope, the study only focused on assessment of devolution practices on food security. The study was delimited to influence of Devolution Practices, Governance Practices, County Government Strategies and Public Participation on food security. On methodological scope, the study collected data from youth group leaders, village elders, women group leaders, administrators, development partners and agriculture extension officers.

### **Limitations of the Study**

There were several challenges experienced during data collection due to the Covid-19 pandemic ravaging the world and Kenya in Particular. Respondents, like any other person, feared being close to any person for being infected. The questionnaires were however distributed to the respondents with a message encouraging them to adhere to the ministry of health guidelines including washing hands and sanitizing. Given that the area of concern had not been declared or even considered a COVID-19 hot spot, and that no case had been reported in the County, the researcher somehow had a way out of convincing the targeted respondents to attend to his questionnaires, an action which led to the success of this project.

## **2. LITERATURE REVIEW**

### **Introduction:**

This chapter covered a review of wide-ranging literature relevant to this research. This included some general research from global and regional sources.

### **Theoretical Framework**

Theoretical Framework of the study involved the linkage of the study to relevant theories in reference to previous studies in the same field of research. This study was therefore guided by the following three theories: Theory of Performance, Stakeholder Theory and Capability Theory.

### **Theory of Performance**

The Theory of Performance (Top) as advocated by Elger (2007) develops and relates six foundational concepts to form a framework that can be used to explain performance as well as performance improvements. A performer can be an individual or a group of people engaging in a collaborative effort on their own accord or on behalf of others to produce a valued result (Harrison and Wicks, 2013). The level of performance depends holistically on six components: context, level of knowledge, levels of skills, level of identity, personal factors and fixed factors (Elger, 2007). Three axioms are proposed for county effective performance improvements, which involves a performer's mindset, immersion in an enriching environment, and engagement in reflective practice.

To perform is to take a complex series of actions that integrate skills and knowledge to produce a valuable result. As advocated by Harvard's Project Zero, performance is closely related to learning-for-understanding (Wiske, 1998).



Performance is an outcome of good governance, appropriate strategy formulation and implementation with proper mass involvement to achieve expected output in this case food security. Measuring performance allows organizations to better understand what stakeholders want and need (Harrison and Wicks, 2013).

### Stakeholder Theory

The concept of the stakeholders was advanced by a scholar Freeman Edward, (1984), in his book Strategic Management; a stakeholder approach which is intended to steer businesses objectively and maximize stakeholders' value for sustainability. Stakeholders are those groups who are vital to the survival and success of the cooperation asserts (Fredman and Miles, 2006). Devolved units are a congregation of several stakeholders created politically and in a political environment to act on behalf of the citizens with a focus on development. To achieve this there must be an intimate relationship between all the parameters and the actors necessary for effective access to and utilization of public resources. The public can invoke the principle of stakeholder recourse through which the stakeholders can bring an action against the directors for failure to perform the required duty (Fredman and Miles, 2006). This is to guide the county Directors and make them observe chapter six of the Kenyan 2010, constitution on leadership and integrity. The need for stakeholder values requires that devolved units deliver services to the electorate and whose performance is gauged and either contract extended or terminated through elections. Measuring performance allows organizations to better understand what stakeholders want and need (Harrison and Wicks, 2013). This theory was relevant for this study since Counties are expected to focus on service delivery returns to stakeholders as they engage in their daily decisions and operational activities. One of the main focuses of operations by the Counties is to ensure adequate provision of services and basic necessities to the stakeholders including but not limited to food security.

### Capability Theory

Sen (1999) sees development as freedom to expand citizen's capabilities, which means increasing citizen's access to opportunities and to things they value most. Food is a basic need and highly valued by human beings and as (Maslow, 1943), puts it in his motivational works that indeed human needs are satisfied in succession and without which one cannot move to the next level. Dreze and Sen (1999) assert that "A more reasoned goal to make it surely possible is to have the capability to be free from hunger". Sen (1981) approached food security in a multidimensional aspect in that food security cannot be tackled in isolation of good health, education, empowerment, good leadership and governance and participation in community life. Critically speaking the sustainable development goals are guided by Sen.'s ideas. Kofi Annan seem to concur with Sen as he says "A world of interdependence cannot be safe or just unless people everywhere are freed from want and fear and are able to live in dignity (Annan, 2005).

The researcher's interpretation of the "capability to be food secure" was closely related to what (Dreze and Sen, 1989) refer to as "adequate nourishment" which is in tandem with FAO (2010) definition of Food security. Sen (1981) pointed out that adequate food supply is only one of the main preconditions of having enough food to eat, while the causes of hunger and starvation may be of other nature. The theory vehemently comprehends the four food security dimensions namely; food availability, access, utilization and stability as defined in the world food security report 2018. The capability theory is not only limited to evaluation of poverty and deprivation but also serve as a framework for program or policy evaluation. It is on this precinct that the researcher considers the theory very fundamental in the assessment of the influence of devolution practices on food security in ASAL areas with specific emphasis to West Pokot County in Kenya.

### Conceptual Framework

A conceptual framework is a logically developed, described and elaborated network of interrelationships amongst variables in a scenario that is being investigated (Kothari, 2014). A dependent variable is the variable of primary interest to the researcher and in this study it is food security while the independent variable is devolution practices. An independent variable is the one that influences the dependent variable in either a positive or negative way. The following conceptual framework was derived by the researcher for purposes of this study.

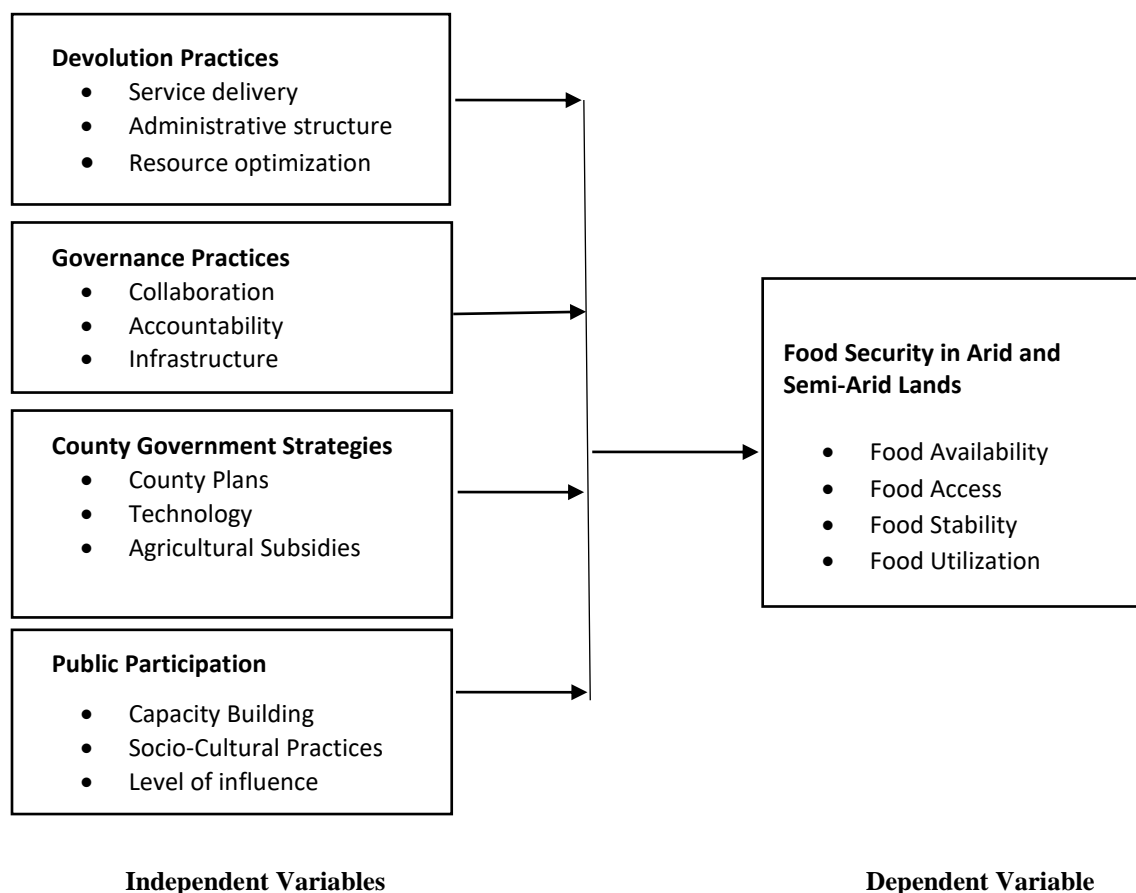


Figure 2.1: Conceptual framework

## Review of Variables

### Devolution Practices

Devolution promotes active involvement of citizens in the planning and policy formulation process, through giving citizens more influence and control over their lives and choices they make (Recha, 2018). It brings representation closer to the people increasing accountability, legitimacy and the need for optimal resource use (World Bank, 2012). Devolution being the taking of self-governance instruments closer to the populace is one of the best agencies for generating motivation, encouraging mobilization for self-help and reaping maximum benefits from the scarce local resources. It encourages the much needed wider participation of the local population in the decision making process at the local level (Ikechukwu and Elnwa, 2015). As an agent of development, the major priorities of devolution should be to offer quality service in order to reduce poverty in the community, increase the standard of living of the people, provision of social amenities, enhancing the participation of local citizens in political activities that concern them, enhancing their individual human capabilities, boosting nationalism, inspiring creativity and innovation as well as educating local people while holding the leadership accountable (Bello, 2016). The recognition and importance of quality service delivery in devolution in the development process is prompted by the need to tackle local socio economic problems and to manage participative development (Bowman and Kearney, 2016). In most developing countries, like Kenya, devolution could help solve the various problems faced by the ASAL's populace as local governments are at the center of implementing community development plans and programs (Bowman and Kearney, 2016). Food security requires decentralized governance as well as proper interventions to guarantee the sustainability of food production, distribution, and consumption. On the other hand, decentralized governance requires a strong, stable local government that will enhance and protect food security at the local level (Edralin and Collado, 2005).

### Governance Practices

In recent years, Food security has received much attention by national governments in the African continent (Lang and Barling 2012; Allen 2013; Candel, 2014). This increase in attention emanates particularly from the fact that most African

nations were in food insecurity situations. According to the World Development Report (2010), these situations were most noticeable after the 2007–2008 and 2010 world food price crisis which called for greater investment in agriculture in developing countries. (Ingram et al, 2010) and Candel (2014) opined that food security is strongly interlinked with global environmental change and energy markets leading to the policy environment undergoing transformation and globalization. These reasons have led to food security becoming a sensitive topic that finds wide resonance among devolved governments' policy considerations in Kenya (Candel *et al.* 2014; Njuguna, 2016). The role of governance, within these recent food security debates, has been attracting increasing attention. This development has been due to the notion that food security solutions, approaches and practices should also take social, economic, and political aspects into account (Maye and Kirwan 2013). According to Kropff *et al.*, (2013), “food security cannot be realized by means of idealistic plans or new technologies only. It requires advanced steering strategies that involve governments as well as companies, development partners like NGOs and citizens.”

According to Termeer *et al.*, (2011), governance is “the interactions between public and/or private entities ultimately aiming at the realization of collective goals.” Governance is generally differentiated from government, which is associated with more hierarchical and state-centered modes of managing public issues (Kersbergen and Waarden, 2014). For purposes of food security matters, governance has often been defined as “all people, at all times, having physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life” (FAO 2013). Njuguna (2016) posits that governance is constituted by the following elements; food availability, food access, and food utilization, and their stability over time. The devolved governments in Kenya (including West Pokot County government) have been handed the responsibility of the devolved function of agriculture in order to deal with the challenging issue of food security in their different regions because it is a unique topic varying from one governance area to another (Kenya Constitution, 2010). Paraphrasing Ingram (2011) and Candel *et al.*, (2014), this governance is practiced both within and outside food systems which cover factors like food prices, collaborations, agricultural trade, poverty reduction, accountability, infrastructure, education, and crisis management. In addition to interactions aimed at improving food security, food security governance is about managing the context in which these interactions take place.

### County Government Strategies

A strategy is an integrated and coordinated set of commitment and actions geared towards a specific result- an organization's game plan on how to achieve its goals and objectives (McGregory, 2009). When choosing a strategy, firms make choices among competing alternatives as the pathway for deciding how they will pursue strategic competitiveness (Gichuhi, 2015). Organizations usually attain specific performance levels based on the strategies they adopt. A good strategy should help an organization to minimize its competitive disadvantage but maximize its competitive advantage.

County government strategies should be focused and people centered in order to elicit interest, participation and ownership. The ASAL communities are particularly still clung on to their culture and therefore strategies that seem foreign would surely be resisted. In ASAL's, there exist competing land uses including crop production and pastoralism; human-wildlife conflicts and pastoral communities competing for access to pasture and water (GOK, 2017). Therefore, it is of interest to see how the County Government strategies employed address these traditional challenges or system to fast track achievement of food security. Although County governments tend to promote food security for its citizens using different strategies, it is important to evaluate the effect of these strategies on food security.

As regards to the West Pokot County, under the leadership of the governor, Prof. John Lonyangapuo, the county government prepared a County Integrated Development Plan 2018-2022 in which the strategies were detailed. According to the CIDP (2018), the county planned to oversee the provision of subsidies to farmers, improved irrigation services, access to agricultural products markets, storage facilities among other services. The main food crops produced in West Pokot County include maize, beans, sorghum, finger millet, green grams, Irish potatoes, sweet potatoes and bananas. West Pokot farmers mainly grow horticultural crops which include fruits and vegetables both exotic and local (CIDP, 2018). The farmers contribute immensely to food security as it is used for food as well as generate income to the households. The farmers are not left behind in cash crop farming including coffee, pyrethrum, sunflower and tea albeit on small acreage. Ekaaliyo (2017) posited that the county has a high potential to expand the acreage under cash crops when government streamlines the market for the produce. According to the CIDP (2018), the county residents' staple food is maize which is mainly grown in the high rainfall areas of the county. The farm yields are however low as they are grown



without using fertilizer and certified seed. The county plans, as indicated in the CIDP (2018), to subsidize the farmers through ploughing and provision of farm inputs like fertilizer, and certified seeds, with emphasis to needy farmers, to transform this sector to be able to support the turnaround of the food security/insecurity situation in the county.

To increase the land under food crops, development of irrigation schemes has commenced with most of them under construction while some are complete. According to the Rutou (2018), agriculture in the county is faced with main challenges among them, high illiteracy levels among farmers, climate change effects, low fertilizer and certified seeds usage, pest and diseases and low extension coverage. With the progress exhibited, the huge potential for commercialized agriculture in the county will be achieved within schedule to ensure food security achievement is fast tracked. The major storage facility for the county cereals with a capacity of 150, 000 bags of cereals (90kg bags) is the National Cereals and produce Board located in Makutano, Sigor and Kacheliba sub-counties of West Pokot County (Kiprotich, 2017). There are two more private storage facilities in the county while the other farmers use small granaries which are prone to high post-harvest losses.

Finally, beekeepers who are mostly promoted by the livestock department with emphasis on use of modern hives and equipment need clear programs for them to contribute towards food security in the county (Ekaaliyo, 2017). There are about 149,478 bee hives producing approximately 1,196,000 kg of honey and 119,600 kg of wax annually (CIDP, 2018). To discourage beekeepers selling their honey in crude form to traders within and outside the county, the county government is carrying out civic education to increase the farmers awareness and partnering up with large scale buyers who process or semi-refine the honey before marketing.

### **Public Participation**

In the Kenyan ASAL, food security has always been a challenge and the problem can only be solved by adopting a holistic approach to planning and implementation (Muniu, 2018). Among the factors that could solve the food security in these regions is the involvement of the local public to ensure that they own the project/solutions through public participation for proper sustainability. Mulwa (2010) asserted that one of the determinant factors for the sustainability of the systems adopted towards achieving food security is the willingness of the community to sustain the drive to success. The willingness was indicated in the form of local community's provision of valued resources like land and labor which are the main factors of production towards achieving the food security goal Muniu (2018). The devolved units ought to encourage the public, through social awareness during the pre-implementation, as well as engaging responsive approach. Projects initiated by the county governments in the ASAL areas should be more or less demand responsive to the degree that beneficiaries support them, especially due to the communities in the ASAL being pastoralists (Mulwa, 2010; Muniu, 2018). Muniu (2018) avers that when the initiators of the projects involve the users in all the project stages/phases including; planning, implementation, operation, protection and maintenance of the projects systems enhances their sustainability and hence alleviation of the hunger menace. According to White (2011), Public Participation can take different forms depending on the different shades and capacity by different project stakeholders in line with individual areas circumstances. Public or Community contributions might take the form of labor, material, equipment, or participation in project-related decision-making and meetings (Muniu, 2018). According to Ostrom (2017), for purposes breaking the passivity and dependency patterns it is imperative that the beneficiaries of the food security project provide labor, time, and materials in order for them to be part and parcel of the programs and learn how to be independent in future. The main deficiency in ASAL areas is lack of enough water yet it is a major resource towards achieving food security and as such the devolved units should strive towards its exploitation Ekaaliyo (2017).

Muniu (2018) concluded that demand by household for food supply can be used to signal their willingness to support the project. The county government ought to take such an opportunity to create awareness in the communities in order to jointly drive the agenda of sustainable food security in the ASAL areas, including West Pokot County.

### **Food Security**

Food security is a concept that evolved over time and has been defined by different scholars, depending on their perception of it (Aidoo, Mensah and Tuffour, 2013). Food security is nowadays defined as "a situation when all people at all times have physical and economic access to safe, sufficient, and nutritious food needed to maintain a healthy and active life" (Adenyi and Ojo, 2013). This widely accepted definition of food security points at four dimensions of food security namely; Food availability, access, utilization and stability (Aidoo, Mensah and Tuffour, 2013). A household is

considered food-secure when its occupants do not live in hunger or fear of starvation. According to Cillespie and Haddad (2015), a household is only food secure if it has reliable access to food in sufficient quantity for all members of the household to enjoy active and healthy life. Availability refers to the physical existence of food and is achieved when sufficient quantities of food are consistently available to all individuals within a country (Kuku-Shittu *et al*, 2013). This is a function of household production, commercial food imports, food aid, domestic food stock, as well as the underlying determinants of each of these factors (Aidoo *et al.*, 2013). This is the supply aspect of food security, it ignores the fact that adequate food availability at the county level does not automatically translate into food security at the individual and household levels.

Access entails the ability to have sufficient income to obtain the required amounts of foods to meet the need. It is ensured when households and all individuals within them have adequate resources to obtain appropriate food for a nutritious diet (Cillespie and Haddad, 2015). Access to adequate and nutritious food is limited by poverty and physical inability since nutritious foods are relatively expensive. Utilization refers to the efficient biological use of food to acquire its maximum benefits and essential nutrients. Effective food utilization depends in large extent on knowledge within the household (Aidoo *et al.*, 2013). This can be increased through processing, proper health to digest and storage. Stability would imply the temporal ability to sustain a fairly uninterrupted supply of food within a specified period. Food security is usually classified into; chronic food insecurity- the inability to meet food needs on an ongoing basis and transitory food insecurity- when the inability to meet food needs is of a temporary nature (Aidoo *et al.*, 2013). Food stability is measured based on the extent and exposure to the risk of food insecurity.

### Critique of the Existing Literature

As Sen (1981) pointed out, adequate food supply is only one of the many preconditions of having enough food to eat, while the causes of hunger and starvation may be of other nature. Ali, Muturi and Mberia (2018); Nayioma (2016) and AWSC/ KNBS (2015) concentrated on the availability by focusing on the households and gave little regard to the aspects of ability to access and utilize the available food nutritiously. Njuguna (2016) in her study on the effects of devolution on community development felt short to opine that community development is measured based on projects initiated and citizen participation. Sen (1999) sees development as freedom to expand citizen capabilities. To him freedom means increasing citizen access to opportunities and to things they value most.

Brinkman *et al*, (2010) says 2007-2008 and 2010 food price crisis and subsequent food spikes in the market kept millions of people in food insecurity while David and Katua (2013) assert that it's a prime challenge to ensure food security and nutrition in a sustainable manner in environments that are prone to drought and unpredictable climate change, at the same time Nayioma (2016) in his work, food security as a governance problem in Africa: A case study of Kenya, builds his argument on the scramble for Africa. We cannot live in history forever. Historical causes and consequences cannot be lived from generation to generation as much as history explains our past with the present in mind to connect as to the future, it should not be an embedment.

David and Gatua (2013) definition of ASAL should not be an excuse to food insecurity. A Country like Egypt is in the desert yet fairly food secure -17 % of the Egyptians are food insecure, (WFP, 2013) while 36.5% of Kenyans are food insecure (FAO, 2019) it's about technology and attitude. Brinkman *et al*, (2010) and Nayioma (2016) assertion should be the current generation's building blocks. Governments and stakeholders should think outside the box and have a change in its mindset and attitude.

Timmer (2005) and IFPRI (2012) do acknowledge that indeed causes and proposed responses to food security go beyond Agriculture and household levels into international trade and amongst other nonfood sectors. This should not mean to undermine local issues and measures to food security. Most Sub Saharan African countries are food insecure due to poor self-governance, resource under and miss utilization as well as cultural underpinnings and machismo fundamentalism which is prevalent especially in ASAL communities. Edralin and Collado (2005), cites population growth, poverty and slow economic growth as the underlying causes of food insecurity. The governments should have instruments to estimate future events and put measures in place to respond adequately.

Most studies, Cornell and D'Arcy (2016) and Josefa and Collado (2005); confirm that indeed devolution should be citizen centered and needs to liberate people from bondage of in human conditions. Unfortunately leaders elected end up fulfilling their egocentric motives, breed greed, autocracy, inefficiency, corruption and nepotism to the disadvantage of the majority poor citizens.

### Research Gaps

The study in Mandera analyzed food insecurity, underlining the significance of accurate measurement to formulate the required policies for addressing food deprivation. The need for accurate measurement of food requirement is essential to generate adequate information to support decision making especially in areas vulnerable to food shortages and famine (Waithaka, 2015). The study was different in that it focused on the influence of devolution practices on food security in Arid and Semi-Arid Areas, with emphasis on governance practices, county Government strategies and public participation in West Pokot County, Kenya. The reviewed literature above did not show any work done on influence of devolution practices on food security in county governments in Kenya. The researcher aimed at filling this gap of showing whether devolution has an influence on food security.

### Summary

Food security has received worldwide resonance among the academicians and most scholars agree that its approach should not be limited to technical and environmental dimensions but rather extend to social, economic, cultural and political aspects with collective responsibilities amongst all concerned. Devolution offers an opportunity to reach out to the people and promote a more balanced socio-economic development across the country, though our leaders need to be sober, selfless and open minded to achieve the prospects of devolution. Arid and Semi-Arid areas should benefit from devolution, amongst them, West Pokot County.

## 3. RESEARCH METHODOLOGY

### Introduction

This chapter covered a description of research design and methods to be applied in carrying out the research study. It was organized under the following sections: Research Design, Target Population, Sampling frame, Sample Size and sample technique. The chapter also covered: Research Instruments, Pilot test to gauge the instruments Validity and Reliability and Data collection procedure, processing, Analysis and presentation.

### Research Design

A research design is a guide on how the research will be done and the work plan and time frame involved. It is important because it assists the researcher to collect relevant data at minimal cost, time and effort and hence achieving optimal efficiency (Kothari, 2014). This study adopted a descriptive research design. A descriptive research design was deemed appropriate because the main interest was to explore the viable relationship of the variables and describe how the factors support matters under investigation. Descriptive research design method provides quantitative data from a cross section of the chosen population. This method collects data in order to answer questions concerning the current status of the subject under study (Mugenda and Mugenda, 2013) and similarly be able to describe the specific phenomenon in its current trends, events and linkages between different factors at the current time.

### Target Population

Target population is a group of interest from which the individual participants or objects from which the measurement is taken (Blumberg, Cooper and Schindler, 2014), while (Ngechu, 2014), defines a population as a set of people, events, services, elements, group of things or households under study/investigation. In this study the target population was 3508 individuals drawn from Chairpersons of youth group, women groups registered since 2017, village elders, county administrators, development partners and county agricultural extension officers.

**Table 3.1: Target Population**

<b>Strata</b>	<b>Total</b>
Youth group leaders	1029
Village elders	515
Women group leaders	1846
Adminstrators	25
Development Partners	20
Agriculture Extension Officers	73
<b>Total</b>	<b>3508</b>

Source: (Social service department 2020 and CIDP, 2018)

### Sample Size and Sampling techniques

Simple stratified random sampling technique was used to group the target population dealing directly or indirectly with devolution and food security. This ensured equal representation of every homogenous sub groups (Sekaran, 2015). The target population of 3508 respondents was divided into six(6) homogeneous strata, upon which the sample size for this study was obtained using Taro Yamane, (1973), formula for finite population with a 95% confidence interval level as follows;

$$n = \frac{N}{1+N*e^2}$$

Where,

n the sample size

N the size of the population.

e the acceptable sampling error

\* 95% confidence level and  $p = 0.05$  are assumed.

$$n = \frac{3508}{1+3508(0.05^2)} = 360$$

The sample size from each stratum was then arrived at to give a total sample size of 360, from the above computations, of the target population as indicated in the table below;

**Table 3.2: Sample Size**

Strata	Target Population	Sample size	Sample size distribution %
Youth group leaders	1,029	104	29
Village Elders	515	54	15
Women group leaders	1,846	187	52
Adminstrators	25	4	1
Development Partners	20	4	1
Agriculture Extension Officers	73	7	2
<b>Total</b>	<b>3,508</b>	<b>360</b>	<b>100</b>

This was the study sample size used to generalize the findings of the study and is in line with (Mugenda and Mugenda, 2019) who recommended at least 10% of the target population. In order to give equal chance to each member in the strata, simple random sampling was used to arrive at the sample size which was in line with (Kothari, 2014) who noted that a population from which a sample was drawn should constitute a homogeneous group. The sample size was then divided equally among the five (5) sub counties in west Pokot County.

### Data Collection Instruments and Procedures

The study made use of mainly primary data. Creswell (2013) defines primary data as the data collected for the first time. Questionnaires were appropriate as they allowed the collection of information from a large sample with diverse background and the findings remained confidential, saved time and with no biasness (Kothari, 2014). Prior to data collection, a license to collect research data was seek and granted by National Commission for Science, Technology and Innovation (NACOSTI), while another letter of introduction was drafted and permission obtained from Jomo Kenyatta University of Agriculture and Technology, department of development studies in the school of communication and development studies defense panel, which was transmitted to respondents to communicate the identity of the researcher. In addition, the purpose, duration and potential use of the research results were clarified to the respondents and interviews carried out with only those who agreed to participate in the study. The questionnaires were administered by the research assistants under the supervision of the researcher and confidentiality was guaranteed as names of respondents were not written anywhere. The questionnaire used a 5-point rating scale (Likert-scale) to solicit information from respondents and was elaborated and designed in a way that every question in the questionnaire related to research objectives and questions of the study.

### Pilot Study

This is a mock study that helps in assessing the suitability of data collection instruments and identifies any difficulty that could be experienced during the actual study (Anao, 2016). The pilot test involved ensuring the validity and reliability of research instruments and involved 36 respondents which according to Kothari and Garg, (2014) was 10% of the sample size. The questionnaires were distributed as follow; Youth group leaders 10, Village elders 5, Women group leaders 18, Administrators 1, Development partners 1 and Agricultural extension officers 1.

### Validity of Research Instruments

Creswell (2013) defines the concept as “the extent to which the results from analysis represents the phenomenon under study.” Validity may be in form of; Face validity- implies that anybody can see that the method being used is valid and sensible, Construct Validity - is whereby the used technique really captures what it is supposed to measure and Internal Validity - implies causality, thus the happening of X results in Y taking place. In this study, validity of the research instruments was determined through content analysis of the instruments by piloting, where the responses of the subjects were checked against the specific research objectives. The opinion of the experts was also sought on the aspects of validity of document.

### Reliability of Research Instruments

Reliability is the degree to which a research instrument produces stable and consistent results (Anao, 2016). Research must be auditable, transparent and clear so that readers can apply the same method themselves and produce the same results with confidence. Reliability was enhanced through collection of adequate data so as to draw conclusions that were coherent. Cronbach alpha test re-test method was used to measure reliability of the research instruments and a coefficient of over 0.7 was deemed satisfactory.

### Data analysis and Presentation

Data analysis is a process that involves concentrated operations which are performed in order to summarize obtained data and present it in a format which answers questions of the study (Kothari, 2014). After analysis, data was presented with ease of comprehension. Since the data collected was of quantitative and qualitative nature, both quantitative and qualitative data analysis techniques were used. Qualitative analysis technique constituted tables analyzing data collected while quantitative analysis technique relied on inferential statistics using the Statistical Package for Social Science software with the ANOVA, Regression Analysis and Correlation Analysis in order to establish variations in responses given. The researcher had to first establish if adequate data had been collected through the administration of the research instruments. Thereafter, SPSS was used to generate and present frequency tables, bar graphs and percentages and means. Data was analyzed on a deductive manner based upon the importance and significance of achieving the research objectives and presented thematically.

All filled questionnaires were checked for completeness before they were entered into the SPSS (version 23) software for analysis. A multiple regression analysis was used to establish the relationship between the study variables (Kothari, 2014).

The multiple regression equation took the form of the model shown below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where:

Y	the dependent variable (Food security)
$\beta_0$	the regression constant
$\beta_1, \beta_2, \beta_3$ and $\beta_4$	the coefficients of independent variables $X_1, X_2, X_3$ and $X_4$
$X_1$	Status of Devolution
$X_2$	Governance Practices
$X_3$	County Government Strategies
$X_4$	Public Participation
$\epsilon$	the error term.



#### 4. RESEARCH FINDINGS AND DISCUSSIONS

##### Introduction

The chapter constituted the analysis of collected data, findings and eventual discussion of the analyzed data. Correlation analysis, regression analysis and ANOVA were the tools used in the data analysis in line with the study objectives, namely; Devolution Practices, Governance Practices, County Government strategies and Public Participation.

##### Response Rate

The research instruments were distributed to the three hundred and sixty (360) respondents in West Pokot County for data collection purposes as follows; out of which three hundred and twenty seven (327) questionnaires were satisfactorily filled and returned, thirteen (13) questionnaires were not satisfactorily filled though returned while twenty (20) questionnaires were not returned. This represented a response rate of 91% which according to Muniu (2018), this response rate was reasonable for research purposes. The response rate results were as presented in the table below;

**Table 4.1: Response Rate**

	Frequency	Percent
Satisfactorily filled	327	91
Not Fully Filled	13	4
Unreturned	20	5
<b>TOTAL</b>	<b>360</b>	<b>100</b>

##### RESPONDENTS' GENDER

Data on the respondents' gender was collected and tabulated as shown in the table below;

**Table 4.2: Respondents' Gender**

Gender	Frequency	Percent
Male	118	36
Female	209	64
<b>Total</b>	<b>327</b>	<b>100</b>

The information presented in the table above provided the data collected on the gender of the respondents. From the table, the distribution among the gender was 36% male respondents and 64% female respondents.

##### Respondents' Age

The findings of the respondents' age were as presented in table 4.3 as shown below.

**Table 4.3: Respondents Age**

Age bracket (Years)	Frequency	Percent
18 – 24	42	13
25 – 34	56	17
35 – 44	72	22
45 – 54	88	27
55 – 64	49	15
65 and Above	20	6
<b>Total</b>	<b>327</b>	<b>100</b>

This section presented the age of the respondents. The study found that majority (27%) of the respondents were aged between 45 and 54 years followed by 22% of the respondents who were aged between 35 and 44 years, 17% of the respondents were aged between 25 and 34 years old, the youngest category of the respondents were aged between 18 and 24 years old and represented 13% of the total number of respondents. Youth being 18-34 years were 30% of the respondents. Those of age, 55 and 64 year old respondents were 15% while the minority representation was from those aged 65 years and above at 6%.

These data was plotted on a bar chart as depicted below;

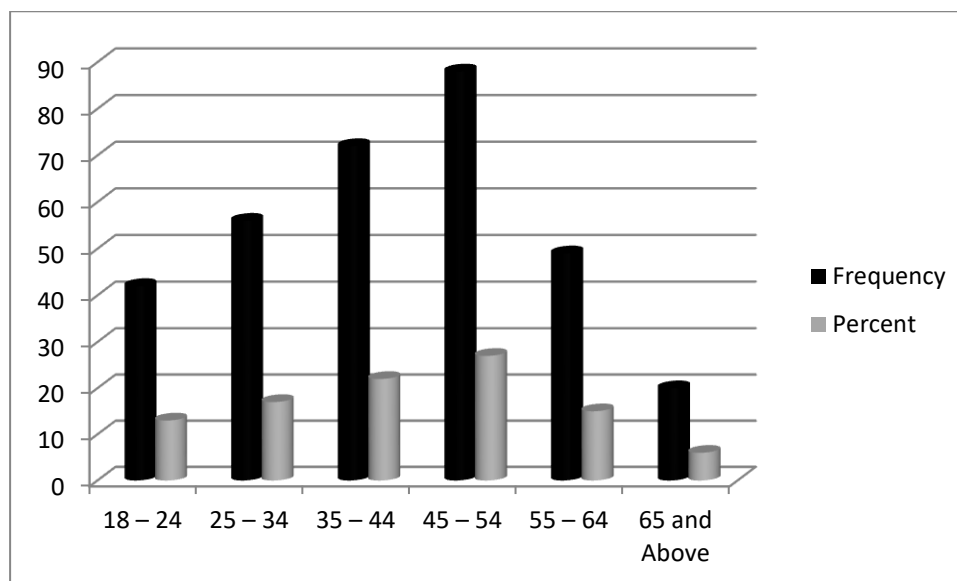


Figure 4.1: Respondents' Age

#### Respondents' Marital Status

The data on marital status was important and therefore collected and tabulated as shown in the table below;

Table 4.4: Respondents' Marital Status

	Frequency	Percent
Married	236	72
Single	91	28
<b>TOTAL</b>	<b>327</b>	<b>100</b>

Data on the marital status was important because in West Pokot County, land is predominantly and culturally owned by men/husbands in the family. 72% of the respondents responded that they were married while only 28% were single. This was considered a good return on the basis of the reliability of the questionnaire feedback from the respondents.

#### Respondents' Education Level

The respondents' data on education level was collected and presented in the table below;

Table 4.5: Respondents Education Level

Category	Frequency	Percent
Certificate	115	35
Diploma	78	24
Degree	62	19
Post graduate	23	7
Others	49	15
<b>Total</b>	<b>327</b>	<b>100</b>

The information on the respondents' education qualifications was collected and presented in table 4.5 above. From the data collected, most respondents had at least a post-secondary qualification, where majority of them were certificate holders at 35%, diploma holders at 24%, degree holders 19%, Post graduate were the minority, represented by 7% while the category of others was found to be qualifications not included in the questionnaires, among them; below KCPE qualifications and Certified Public Accountant (CPA). These results indicated that apart from the hands-on experience, the respondents had reliable academic qualification levels necessary for the response to the questionnaires appropriately and reliably for the purposes of data collection and eventual analysis and conclusions for the study.

### Respondents' Period of Service

The respondents were required to indicate the period which they had served either in their current position or any other positions provided it was within the same county. Data collected was as tabulated below;

**Table 4.6: Respondents' Period of Service**

Period in Years	Frequency	Percent
<5 years	102	31
>5 years	225	69
<b>TOTAL</b>	<b>327</b>	<b>100</b>

Table 4.6 above showed the period in years which the respondents had served in their respective departments or within the county. From the period of service the respondent had been in the department or section related well with their experience and hence a reservoir of the required data for the study. Majority of the respondents had been in service for over five (5) years, this being 69% of the total. 31% represented the respondents who had served for less than five (5) years in their respective areas or in the county.

**Table 4.7: Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.797	.802	5

### Validity of the research instrument

Creswell (2013) defined validity as "the extent to which the results from analysis represent the phenomenon under study." Validity may be in form of; Face validity, which implies that anybody can see that the method being used is valid and sensible; Construct Validity, where the used technique really captures what it is supposed to measure; and finally Internal Validity which implies causality, thus the happening of X results in Y taking place. In this study, validity of the research instruments was determined by the responses of the subjects being checked against the specific research objectives. This majorly relied on the opinion of the experts/supervisor which was sought on the aspects of validity of the research instrument.

### Analysis of Food Security in West Pokot County

Collected data on Food Security was presented in table 4.8 as below;

**Table 4.8: Food Security**

Item	SD %	D %	N %	A %	SA %
West Pokot county produces enough food to meet the needs of its people	28	37	15	13	7
Foodstuff supplies in the county are majorly from the neighbouring counties brought about by business people	20	25	14	21	20
The county has enough food reserves to cushion it from food insecurity emergency	33	27	8	17	15
Food stuffs are readily available in the county all year round and at affordable price	37	34	2	19	8

From Table 4.8 above, on Food Security in West Pokot County (the dependent variable), 28% of the respondents strongly disagreed as to whether West Pokot county produces enough food to meet the needs of its people, 37% disagreed, 15% were neutrals, 13% agreed that indeed West Pokot county produces enough food to meet the needs of its people while a

mere 7% strongly agreed to this statement. When asked about whether Foodstuff supplies in the county are majorly from the neighboring counties brought about by business people, 20% strongly disagreed, 25% disagreed, 14% of the respondents remained neutral, 21% agreed while 20% strongly agreed that Foodstuff supplies in the county are majorly from the neighboring counties brought about by business people. Since the negative feedback in the first question were greater than the positive ones, there was need for the county government to up it's game in ensuring that enough food is produced to meet the needs of its people. The second question left the respondents equally divided thereby leading to the researcher concluding that there is need for the county government to ensure that the situation is clear enough as regards to the foodstuff supplies in the county, enough production of food in the county will rectify this particular situation.

As to whether the county has enough food reserves to cushion it from food insecurity emergency, 33% of the respondents strongly disagreed, 27% agreed, 8% remained neutral, while the respondents that agreed or strongly agreed that the county has enough food reserves to cushion it from food insecurity emergency were at 17% and 15% respectively. In relation to whether Food stuffs are readily available in the county all year round and at affordable price, 37% of the respondents strongly disagreed, 34% disagreed, only 2% of them did not seem to make a decision, 19% agreed while 8% strongly agreed that indeed Food stuffs are readily available in the county all year round and at affordable price. The researcher therefore concluded that the county had no sufficient food reserves and that food stuffs were not readily available all year round.

### Analysis of the specific objectives

#### Influence of Devolution Practices on Food Security

The findings on the Influence of Devolution Practices on Food Security were presented in Table 4.9 as shown below;

**Table 4.9: Influence of Devolution practices on Food Security**

Item	SD %	D %	N %	A %	SA %
Devolution has an influence on food security in the County.	10	7	8	39	36
Food security has improved since the implementation of devolution	11	22	22	26	19
As a result of devolution there has been increased allocation of funds to agricultural development	8	22	11	44	22
Accessibility to food has been important as regards to food security in a devolved system	0	15	0	48	37

Table 4.9 above presented the respondents' feedback on the first specific variable; Influence of Devolution Practices on Food Security. On whether devolution has an influence on food security in the County, 10% of the respondents strongly disagreed that devolution has an influence on food security in the County while 7% disagreed to this statement, 8% remained neutral, 39% agreed while 36% strongly agreed that indeed devolution has an influence on food security in the County. On whether the Food security has improved since the implementation of devolution, 11% of the respondents strongly disagreed, 22% disagreed, another 22% were neutral respondents, 26% of the respondents agreed that it was true Food security has improved since the implementation of devolution with 19% strongly agreeing. The feedback was a clear indication that the residents (respondents) were in approval of the work being done by the West Pokot county government in relation to ensuring that food security is achieved. However, the high number of neutral respondents on whether Food security has improved since the implementation of devolution left gaps as to the improvement of food security in West Pokot County since the implementation of devolution

### Relationship between Variables

Through the multiple regression model, the study measured and tested the nature of the relationship among the variables; the dependent variable (Food Security in West Pokot County) and the independent variables (Devolution Practices, Governance Practices, County Government Strategies and Public Participation). The ANOVA table below presented the results of this measure;

**Table 4.10: ANOVA TEST**

Model		Sum of Squares	df	Mean Square	f	Sig.
1	Regression	30.235	1	30.235	12.774	.05 <sup>b</sup>
	Residual	771.657	326	2.367		
	Total	801.892	327			

a. Dependent Variable: Food Security

b. Predictors: (Constant); Devolution Practices, Governance Practices, County Government Strategies, Public Participation

The F-ratio of 12.774 at  $p < .05$  signified that the regression model was fit for the analysis and eventual prediction of the results plus fitting the study model. This was so because the calculated F-value was significantly greater than the F-critical value. The study model was therefore utilized.

## Regression Results

### Regression Results for Food Security

For purposes of exploring the dependent variable (Food Security) indicators, the study used independent variables in the model. The coefficient of determination ( $R_{\text{Squared}}$ ) in this case was used to identify the variance at which the dependent variable was affected by the independent variables in the model. A high value of the coefficient of determination ( $R_{\text{Squared}}$ ) depicts a better reliability of the model for the conclusions/findings made.

**Table 4.11: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.942 <sup>a</sup>	.887	.890	.115

a. Predictors: (Constant), Devolution Practices, Governance Practices, County Government Strategies and Public Participation

The predictor variables (Devolution Practices, Governance Practices, County Government Strategies and Public Participation) contributed, overall, 88.7% ( $R^2 = .887$ ) of the predicted variable (Food Security) as presented in the table above, indicating that only 11.3% variance in the changes/effects in the predicted variable was due to factors not included in the study.

## 5. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

### Introduction

This chapter presented the summary of the findings in chapter four from the analysis of data, conclusions and the recommendations according to the study objectives. The final subsection of this chapter was the suggestion on areas for further study.

### Summary of findings

#### Food Security

From the analysis of data on Food Security in West Pokot County, only less than a quarter of the respondents were satisfied that West Pokot County produces enough food to meet the needs of its people. The feeling of the respondents concerning the supplies of Foodstuff in the county constituted less than fifty percent who thought the supplies come from within the county. A fair majority of the respondents indicated that the said supplies do not come from neighbouring counties by business people. Less than a third of those asked whether the county has enough food reserves to cushion it from food insecurity emergency responded in the affirmative. Finally, the respondents majorly indicated that the Food stuffs were not readily available in the county all year round and that the prices for those available were majorly not affordable.



### **Devolution Practices**

The study established that devolution has an influence on food security in the County. This was according to the majority of the respondents who were very enthusiastic about the expectations of devolution in the country based on followed up interview with some respondents. It was however not possible to establish clearly whether the situation had improved, in relation to food security, since the implementation of devolution in West Pokot County since almost a quarter and a third of the respondents were either neutral or in disagreement respectfully, with only slightly above a half agreeing and disagreeing.

The study further established that as a result of devolution, there has been increased allocation of funds to agricultural development. Finally, the study confirmed that accessibility to food in the county has been important as regards to food security in a devolved system; this confirmation was the strongest since all the respondents returned positive responses with only a few disagreeing.

### **Conclusion**

The study made the following conclusions based on the findings from the analyzed data:

That the independent variables (Devolution Practices, Governance Practices, County Government Strategies and Public Participation) strongly and significantly correlated as depicted by the correlation matrix findings. This was also the case between the independent variables and the study dependent variable (Food Security in West Pokot County). As per the correlation results, the variables had the following coefficients: Devolution Practices ( $r = .739$ ), Governance Practices ( $r = .746$ ), County Government Strategies ( $r = .616$ ), and Public Participation ( $r = .631$ ) at  $P < .01$  significance level. According to David and Gatua (2013), correlation matrix results were utilized in the measurement/analysis of the strength of the relationship among the study variables and on arriving at the study recommendations. These results were utilized in conjunction with the regression results which were used in arriving at the study multiple linear regression model which indicated that Governance Practices had the highest influence on food security in West Pokot County followed by Devolution Practices, Public Participation and then County Strategies in that order respectively.

### **Recommendations**

Due to the importance of food security to the West Pokot County government and the county residence as a whole, the following recommendations were made from the study findings;

#### **Devolution Practices**

The West Pokot County government should strive to ensure that the residents feel the difference between the present when they are governed by a local leadership and before when they were governed from Nairobi. This is to say that the food security menace that was so conspicuous in the yester years should be a thing of the past since the county leadership originates from the local community and fully understands the local challenges. Food security should be made a priority by the county leadership. However, there was considerable acknowledgement by the respondents that food security situation had improved since the implementation of devolution, it was therefore recommended that the county leadership continues working on the systems to ensure total eradication of food insecurity in the county if not total minimization/reduction of the same. This can be achieved through sufficient allocation of resources in agricultural programs, have a lean, efficient and effective administrative structure and match available resources with the needs of the people for effective service delivery.

#### **Governance Practices**

The governance practices employed by the county government should be those that positively influence food security. This was because the number of respondents that were undecided on whether governance practices in West Pokot County influenced the food security situation was the same as those who disagree and strongly disagreed combined. Since a more than a half of the respondents were not convinced that the county government was doing enough to improve food security in West Pokot County, the study recommends that the leadership ensures that the efforts and eventual results trickle down to the lowest level for residents to feel the improvement in food security in the county since food is a basic need that has been a major concern in West Pokot County for decades. The county government of West Pokot County should endeavor to use public forums to sensitize the populace on food security measures it is putting in place since the residents seem not

to be reached or sensitized through forums. There is need for the County Government of West Pokot to initiate active partnerships and collaboration with stakeholders on issues of food security with improved synergy in areas of accountability and infrastructural development.

#### Areas for further investigation

Food security is very important in the country. This study extensively centered on only one county out of the forty seven counties in the country. It is therefore suggested that similar work is carried out on a number, if not all, of arid and semi-arid counties to establish the true position, in this counties, in relation to food security and the measures being put in place by the respective county governments in an effort to ensure that the food insecurity problem is well handled to greatly eradicate or minimize hunger and poverty. Future scholars should also carry out studies on the effect of cultural practices on food security since culture in the ASAL areas is still being followed strictly and in the process slowing down some progress instituted by the respective county governments towards the attainment of food security.

#### ACKNOWLEDGEMENT

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