

**FOOD SECURITY AND ECONOMIC WELFARE IN SOUTH SUDAN; ACASE STUDY
OF JUBA COUNTY**

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DECLARATION

I **DENG BIONG DENG**, do hereby declare that this work is original and has never been submitted to any other institution of learning for award of any Degree. Where the work of others has been used, reference has been made thereof.

Sign: .....

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Date: 22/03/2018.....

APPROVAL

I confirm that the work reported in this research report was carried out by candidate under my supervision.

Signature:.....

Mr. MUHEREZA FRANKLIN

Date:.....

DEDICATION

I dedicate this Research Report to my father Biong Deng Kual, my mother Baled Aguer Ater for their parental and financial support during my studies at the university.

ACKNOWLEDGEMENTS

I take this opportunity to acknowledge God who has given me the opportunity to complete my studies. Furthermore, it is my pleasure to convey my humblest gratitude to my Supervisor, Mr Muhereza Franklin for his personal support during the period of writing this Research Report. I must mention his personal advice, guidance and ultimate understanding that eventually enabled me to successfully complete my study.

I convey my gratitude very sincerely to my friends and especially my best friends Okello Moses . I wish also to mention my sweet friends Suzan Abel ,Akuach Mading , for their unconditional love and support during my studies. Many other friends whose input was in one way or another very important for my research are all thanked and you should know that I highly honour all your individual contributions.

Special thanks to Nyinkuanj Akol who helped me to pay for my research I was undertaking at the university.

Last but not least, I want to in a special way pay tribute to my family especially, my mother, my father and my brother Ring Biong, my sisters Adaw Biong for the immeasurable love, encouragement and the ultimate support that went unnoticed throughout my years of study in Uganda. My thanks go to all of you and may the Almighty bless you abundantly

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ABSTRACT

The research carried out on "Food security and economic welfare in South Sudan: A Case Study of Juba County" was aimed at establishing the relationship between food security and economic welfare in South Sudan. The focus of the research also analyzed the economic welfare techniques and how this would enhance and improve the lives of poor households. The investigation was also based on the metrics relevant to economic welfare and the effective mechanisms required in establishing a procedural technique reflecting better food security scenario in South Sudan. The significance of improved agricultural approach as well as aided system of food security has been analyzed in chapter two. The researcher applied the statistical data and use method of empirical research in order to define and make relevant summaries from the data factors. The method that was used to carry out the research was based on exploratory approach and this involved using descriptive survey as an ideal method of getting relevant information that involves food security and economic welfare. The sampling was by randomized means and this was aided by differences in the respondents' classes. The findings of the study showed that food security is an important factor in economic welfare. The research also found out that poverty can be controlled through improved farming techniques and this is as well important in ensuring that farmers are provided with relevant information regarding new farming practices. Chapter five provides a comprehensive conclusion indicating a positive relationship between food security and economic welfare in South Sudan. From the viewpoint of welfare economics, optimal resource allocation depend on the technological characteristics of the invention process and the nature of the market for enhanced food security situation in the country.

CHAPTER ONE

1.0 BACKGROUND OF THE STUDY

Historically, food security initially became a concern at a global level in the early 1930's after World War one when world affairs were being dealt with by the League of Nations.

In his World Food Security, John Shaw reports the Sir John Boyd Orr writings regarding what may be considered as the origin of modern food security. In the early 1930s, Yugoslavia (as a member of the League of Nations) proposed that in view of the importance of food for health, the Health Division of the League of Nations should disseminate information about the food position in representative countries of the world. Its report was the first introduction to the world food problem into the international political arena (Shaw, 2007).

A survey was conducted by the Health Division of the League of Nations and a report on Nutrition and Public Health was submitted in 1935. The report showed that there was an acute food shortage in the poor countries, the first account of the extent of hunger and malnutrition in the world. Reviewing the report, the Assembly of the League of Nations held discussions on nutrition and nutrition policies and the need for coordinated nutrition policies in a number of countries (FAO, 1996).

According to Orr (1966) and Shaw (2007) the League of Nations finally, however, agreed that increasing food production to meet human needs would bring prosperity to agriculture, which would overflow into industry and bring the needed expansion of the world economy through what was described as the marriage of health and agriculture. This association represents probably the premises of modern food security. This assertion contends how often the objective to meet human needs in terms of food has been presented as an important policy objective while in fact governments were

actually simply trying to face political difficulties related to the agricultural sector and to solve economic problems.

The research focused on the impact of food security and economic welfare in South Sudan whereby, South Sudan's 90% estimated 640,000 square kilometers of land is considered suitable for agriculture of which 50% is prime agricultural land. Soil and climate conditions allow for a wide variety of food and cash crops. Over 80% of the population derives their livelihood from subsistence agriculture farming and livestock keeping. About 78% of households depend on crop farming or animal husbandry as their primary source of livelihood. Fifty three (53%) percent of food consumed at household level comes from own production, 32% market purchase and 15% from non-monetary informal exchange. Agriculture constitutes about one-third of the country's GDP employing estimated 67% of the population (UNDP, 2012).

From the down of times, food and food security has been considered one of man's most important basic needs. The heads of state and government representatives gathered at the World Food Summit in November 1996 in Rome, Italy, to reaffirm the right of all to have access to safe and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger (FAO, 1996).

According to the Food and Agriculture Organization (FAO) of the United Nations (UN), the delegates committed to achieving food security for all and an ongoing effort to eradicate hunger in all countries, with an immediate view to reducing the number of undernourished people to half the present level by no later than 2015 (FAO, 1996).

According to the FAO (2005), the proportion of the population that is undernourished varies between the different developing country regions. The highest incidence of undernourishment was detected in SSA, where 33% of the population was found to be undernourished. Some good reasons explain why early approaches to identifying agriculture's economic roles resulted in a one way path that involved the flow of resources towards the industrial sector and urban centres. In Agrarian societies,

(Rosegrant et al, 2005) with few trading opportunities, most resources are devoted to the provision of food. Agriculture's shares of national output and employment therefore start at high levels. As economic welfare proceeds, agriculture's shares of GDP and employment typically fall. Food security and economic growth interact in a mutually reinforcing process over the course of development. It is only in modern times that entire societies have achieved food security.

Earlier, only privileged members of society were able to escape from chronic hunger and the constant threat of famine (Fogel 1991). Many countries in the developing world, especially in Africa and South Asia, have not managed this escape. In these countries, understanding the factors that cause widespread hunger and vulnerability to famines, and the mechanisms available to alleviate their impact, remain important intellectual challenges (Ravallion 1987, 1997; Sen 1981; Dreze and Sen 1989).

Food security exists when all people at all times have physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life. Food security has three dimensions: Availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports; Access by households and individuals to adequate resources to acquire appropriate foods for a nutritious diet; and Utilization of food through adequate diet, water, sanitation and health care (United States Department of Agriculture 1996:2).

This definition is obviously an ideal that no country could hope to reach. Instead of debating definitions, the food security strategies of most countries in Africa have had two basic components, neither of which is linked to any of the standard definitions of food security used by international agencies. By contrast, the Asian countries that have been most successful at providing food security to their citizens have based their

strategies on two elements of their domestic food system over which they have some degree of policy control: the sectoral composition of income growth, and food prices. The rate and distribution of economic growth are primarily matters of macroeconomic and trade policy (once asset distributions are given as an initial condition).

The roots of concern with food security can be traced back to the world food crisis of 1972-1974, and even beyond that, at least to the Universal Declaration of Human Rights in 1948, which recognized the right to food as constituting a core element of what can be defined as an adequate standard of living (UN 1948, cited in Maxwell & Frankenberg, 1995). The concept of food security has evolved, developed, expanded and diversified in recent years, as a result of the diverse nature of the problem (ODI, 1997, cited in Drimie & Mini, 2003). The purpose of this section is to explore the evolution of thinking on the food security concept through the fundamental shifts that it has made since the 1970s: at the levels of analysis, the scope of the analysis, and the assessment of the issue of food security. The history of thinking on food security since the World Food Conference in 1974 may be conceptualized as consisting of three important and overlapping paradigm shifts (Maxwell, 1996). These three shifts are: (1) from global and national, to households and individuals; (2) from a 'food first' perspective to a livelihood perspective; and (3) from the consideration of objective indicators to the consideration of subjective perception.

During the 1970s, understanding of the concept of food security was based mainly on the idea that food security was a food supply problem. The result was that much attention was focused on the self-sufficiency strategies adopted at a national level, such as strategies of ensuring the production of adequate food supplies and of maximizing the stable flow of such supplies. In realizing these strategies, the focus was laid on the implementation of measures aimed at reducing price variability and financing the additional costs of exceptional imports at the international level (Maxwell, 2001).

In 1981, Amartya Sen initiated the paradigm shift that moved the issue of access to food to the centre stage. Since the early 1980s, it has been impossible to speak credibly of food security as being a problem of food supply without referring to the importance of issues of access and entitlement (Devereux & Maxwell, 2001).

Sen (1981) stated, in terms of his 'entitlement approach', that ownership of food is one of the most primitive property rights, which is governed by rules in every society. The entitlement approach concentrates on each person's entitlement to commodity bundles, including food, and views starvation as resulting from the failure to entitlement to a bundle including enough food. Sen's view is a very clear shift from that of seeing food security as a food supply problem, which is concerned with issues of national self-sufficiency and proposals for world food stock or import stabilization schemes, to that of seeing such security as encompassing the access to food allowed to individuals in a household, a view that entitles people to order that they have food, so that they can avoid having to suffer from the effects of starvation and famine.

In the 1980s, the concept of food security shifted from a 'food first' perspective to a livelihood perspective, particularly after the African famine experienced during 1984/85. The conventional view of food security saw food as a primary need. Such a view was well expressed by Hopkins, who argued that "food security stands as a fundamental need, basic to all human needs and the organization of social life. Access to necessary nutrients is fundamental, not only to life per se, but also to stable and enduring social order" (Hopkins, 1986, cited in Maxwell, 2001).

1.2 Statement of the Problem

South Sudan bears major challenges in food security and other human welfare indicators. For example, South Sudan is one of the region of the world where per capita food production has been declining for the past three decades; cereal yields in the region are a quarter of the global average; and it is projected that under the current business-as-usual scenario, the region will not be able to meet the Millennium Development Goals (MDGs) goals for another 100 years—a scenario that is clearly unacceptable. It is well known that in the agriculture-based countries of SSA, agriculture is essential to growth, which is in turn necessary to reduce poverty and food security. Indeed the slow economic growth experienced by South Sudan is to a large extent traceable to the low performance of agriculture. Their estimates reveal that the impact on poverty reduction due to increases in crop yield is greatest in South Sudan. Analysis by Sachs (2005) shows positive correlation between cereal yields in poor countries and average yearly growth of GDP per capita from 1980 to 2000. Agriculture is by far the dominant economic activity in South Sudan. It employs 62% of the population in the region and generates 27% of the GDP of the country (FAO, 2006).

The large gap between the shares of agriculture in employment and GDP suggests that poverty is concentrated in agriculture and in rural areas and that as non-agricultural grow that accelerates; many of the rural poor remain poor. There is therefore need to investigate the impact of food security on economic welfare of the people of South Sudan in order to come up with possible strategies to address the problem.

1.3 Purpose of the Study

The aim of this study was to investigate the impact of food security on the economic welfare in rural communities of South Sudan.

1.4 Objectives of the Study

The study was guided by the following objectives;

- I. To investigate the effects of food security on economic welfare in rural communities of South Sudan
- II. To suggest policy measures that can be implemented to mitigate the problem of food security in rural communities in South Sudan
- III. To examine the relationship between policy growth and food security on economic growth in rural communities in South Sudan..

1.5 Research questions

- I. What are the effects of food security on economic welfare in rural communities in South Sudan?
- II. What are the policy measures that can be implemented to end the problem of food security in the rural South Sudan communities?
- III. What are the relationships between policy growth and food security on economic growth in rural South Sudan communities?

1.6 Scope of the Study

1.6.1 Content Scope

The study investigated the impact of food security on economic welfare in South Sudan.

1.6.2 Geographical Scope

The study was carried out in Juba County, the regional capital of South Sudan. It was carried out among the farming communities and this was based on both small scale and large scale farming. Further, the study reflected on economic growth and other aspects of modernization. This covered approximately 45 square kilometers of the study area.

1.6.3 Time Scope

The study considered a timeline of six years, between 2011 and 2017 for the research. Taking into account that South Sudan became a nation in the year 2011. This will enable collection of data from respondents on issues relevant to South Sudan nation-state capacity on food security and economic well-being of the respondents. The study will take a period of four months.

1.7 Significance of the Study

This study would be of great importance both at the macro and micro level. At the macro level, informed decisions in policy formulations and in the building of the institutional regulatory framework might be made basing on the findings from research.

The Government: The Government would greatly benefit from this research and ideally help in the transformation of the changing agenda relative to approaches of food security situation in South Sudan.

University: From a research perspective, the core variables attributed to the dynamics of expansive research process would be well explored and amplified in order to reorient the overall process and hence improving the changing dynamics of food security situation across the globe. This factor represents new shifts especially in procedures that have helped in mainstreaming the overall synergies across the academic environment.

The Society: The Changing relevance of food security is optimally relevant especially where considerations regarding economic welfare are concerned. Therefore, the society would be bound to benefit from any resultant outcome of a research of this nature and ultimately would be relevantly extracted to review the overall approach to poverty eradication in South Sudan.

At the micro level, provincial leadership may adopt the recommendations put forth, and use the findings to address issues pertaining to food security. The study also opened up areas for further research, in the line of food security in the region and in Africa at large.

1.8 Definition of terms

Food security - Food security is where every person has the physical and economic right to sufficient food to lead a healthy and productive life

Welfare – This is the level of prosperity in an economy, as measured by employment and wage levels.

Poverty - Poverty means being unable to afford basic human needs, such as clean water, nutrition, health care, education, clothing and shelter.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The idea of healthy food system takes into account multiple factors (e.g. economic, social, and biophysical) and actors involved with food (e.g. farmers, food processors, policy-makers, retailers, and others) and the complexity of their interactions. This approach draws substantially from sustainability principles. As Gibson (2005) recognizes, sustainability is a slippery concept that has led to debates and to a huge variety of interpretations. This study adopts Gibson's approach to sustainability which sees it as an open-ended process of thinking and acting that recognizes the links and interdependencies among social, ecological and economic spheres. It includes the core issues of decision-making, taking into account both short- and long-term well-being, from the local to the global.

As noted earlier, the FAO definition of food security, although fairly inclusive, does not incorporate concerns about the way food is produced or distributed. Food may be produced or traded in a way that damages ecosystems integrity, increases social inequities, or undermines cultural traditions. A healthy food system, grounded on sustainability principles, on the other hand, accounts for all those factors, and strives for a state of food security that reconciles proper nutrition with the imperatives of social justice and biophysical integrity. Moreover, it is as state of food security that provides protection from vulnerability (e.g. to market fluctuations, weather variations, food safety scares), and which is capable of sustaining in the long-term.

The purpose of this literature review is to identify definitions and conceptual models that focus on the insecurity aspects of the anxiety related to the lack of food. The intention is to review existing questions for use in the research (Anderson et al., 1996).

The concept of food security has been used for more than two decades as an indicator of the status of growth of a region (ECI, 2002). The purpose of this section is to articulate and clarify the concept of food security.

This broader approach to the economic roles of agriculture suggested that the one-way path leading resources out of the rural communities ignored the full growth potential of their agricultural sectors. A two-way path was needed. Resources still must move towards industry and urban centres, but with attention focused on the capital, technological, human resource and income needs of agriculture. This required policymakers to change strategies. Traditional macroeconomic policies that inhibited rural sector growth through direct and indirect taxation of food producers, traders and exporters would need to give way to a more a non-discriminatory policy environment for agriculture (Krueger et al, 1991; Bautista and Valdés, 1993); investments in producing technological innovations (Hayami and Ruttan, 1971; Pinstup-Anderson, 1994; Oram, 1995); and public investments in rural incomes generating social and physical infrastructure (Adelman, 1984; Vogel, 1994).

Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (FAO, 1996). Such a definition is also in line with the following statements: "Food security, whereby every person has the physical and economic right to sufficient food to lead a healthy, productive life", is determined by access to and availability of food. Access to food is closely related to poverty and economic growth: the poor usually do not have adequate means to gain access to food in the required quantities (Pinstup-Andersen et al.1997, cited in Lado, 2001).

Food security is conventionally defined as consisting of an income, an access and a utilization component (McCalla, 1999). According to Ebony Consulting International (ECI) (2002), people cannot be food secure if they lack sufficient income to buy food.

Similarly, people cannot be food secure if they do not have access to food (i.e. if the food is not physically available or if there is some physical, social or legal barrier to their access to food). The notion of access encompasses the notion of entitlement to food, such as entitlement to the financial means to purchase food (whether such entitlement refers to the receipt of a government pension, or lies in having one's income protected from theft). Finally, people cannot be food secure if they do not correctly use the food to which they have access (i.e. if they do not follow a diet that ensures that they enjoy nutritional security). Effective food utilization depends on the knowledge held by each and every household of food storage and processing techniques, the basic nutritional principles, and proper childcare and illness management techniques (ECI, 2002).

Food security should not be defined as synonymous with either food self-sufficiency or agricultural growth. Food self-sufficiency, which is a narrower concept than food security, can be narrowly defined as the ability of a nation to supply 100% of its staple food needs from domestic production and/or storage under all weather probabilities. Agricultural growth entails the process of increasing agricultural output per capita (Rukuni & Eicher, 1988). Food security should neither be confused with agricultural growth, nor be viewed in terms of the narrow definition of food self-sufficiency or national food availability. Most household food security definitions and conceptual models agree that the key defining characteristic of household food security as a phenomenon is the security of access at all times to sufficient food (Maxwell & Frankenberger, 1995).

2.1 RELATED STUDIES

Although many food security cases have been referred to as food crises in the past, no satisfactory definition of the term 'food crisis' exists in the literature. An implicit definition of 'food crisis' is that of a process in which African governments, and ultimately international donor agencies, have become involved in extraordinary responses to what is perceived to be famine-induced conditions and their associated

risks, as experienced in many parts of the continent (e. g. Cape Verde, Ethiopia, Sudan, Mozambique, Somalia, Chad, Mali, Angola, Botswana and Lesotho). Indeed, the drought- induced or drought-intensified 'food crisis' of 1982-1985 appears to have been the worst in several decades, affecting not only the Sahelian zone countries, but also Eastern and Africa (Christensen & Stack, 1991; Christensen & Witucki, 1986, cited in Lado, 2001).

From the literature it is clear that food (in) security may be defined both at individual and household levels, as well as at national and regional levels. As all such levels are inter-related, the issue of regional food security status cannot be properly analyzed without due consideration being given to individual and household, as well as national, levels. All these levels are therefore to be regarded as important in a study such as this. To grade the severity of the problem, researchers have used categories such as "moderate" and "severe" hunger. Some studies have focused on the impact on households; others have studied the impact on individuals, particularly children (Maxwell & Frankenberger, 1995).

Radimer et al (1992) identified two levels of hunger: The first individual level with four components – insufficient intake, nutritional inadequacy, psychological aspects (deprivation, lack of control) and social aspects (not meeting the social norm of three meals a day; and the second household level with four components – depletion of food resources, unsuitable food options, food anxiety and acquisition of food in socially unacceptable ways.

2.2 Conceptual Framework

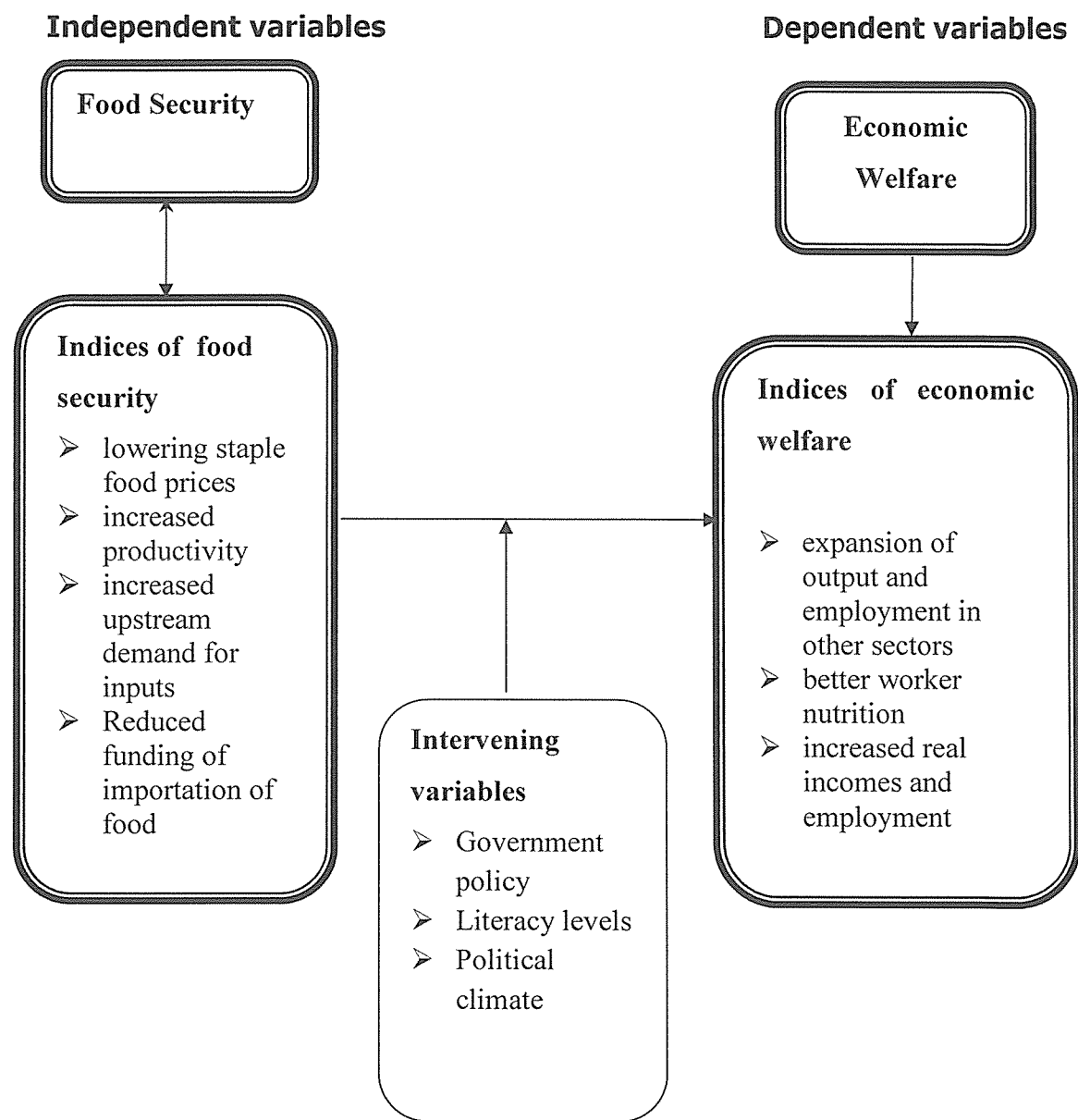


Figure 1: The figure above indicates that interventions to ensure food security are concerned with sustainably increasing food production and increasing household incomes or reducing poverty. It is clear from this perspective that food security and economic growth are very inter-dependent. Food security contributes to growth through: lowering staple food prices and hence wage rates (the wage good effect), which in turn encourages expansion of output and employment in other sectors.

Increased productivity resulting from better worker nutrition and increased efficiency of investment resulting from greater macroeconomic and political stability that accompanies a more reliable food system (productivity linkages).

2.1.1 Agricultural Development Policies

The agriculture and fisheries sector has been performing below expectations and potential. In the 1970s, South Sudan agriculture outperformed most other countries in Africa. From close to 5 percent growth in the 1960s to 1970s, annual growth generally slowed down in the 1980s and 1990s, even experiencing negative 6.5 percent growth in 1997. From 2000 to 2008, agriculture and fisheries growth averaged 3.8 percent, hitting a low of 1.8 percent in 2004 and a high of 5.1 percent in 2006. However, the last two years were marked by progressively slower growth rates of 4.9 percent in 2007 and 3.2 percent in 2008.

2.1.1 Post Harvest Facilities

Minimizing post-harvest losses could greatly enhance incomes in the rural sector. However, the lack of dryers, milling equipment, cold storage facilities and other ancillary post-harvest equipment continues to be a problem in many rural communities. The government estimates that inadequate post-harvest facilities account for losses of around 15 percent in the crops sector and as much as 40 percent in the fisheries sector. The ministry of agriculture targets on the provision of postharvest facilities was based on the assumption that the national government would release the US\$2 million funds programmed annually for post-harvest facilities.

Unfortunately, this has not been the case as the budget releases for post-harvest facilities usually fall way below the planned allocation. In 2008, \$2 million was released for the provision of post-harvest facilities, accounting for only 1.7 percent of the total agriculture budget.

2.3 Economic Welfare

For the purposes of government policy, food security can be thought of as a continuous spectrum—from the micro perspective of nutritional well-being of individuals all the way to the macro perspective that assures regular supplies of food in national, regional and local markets. The challenge, and one important objective of food policy, is to create an environment where access to purchasing power, nutritional knowledge and health care within each individual household assures adequate demand for food in those markets, thus guaranteeing food security at both ends of the micro–macro spectrum. Creating food security at both the micro and macro levels is a complicated task in an open, market-oriented economy, but it is only this kind of economy that can generate rapid growth and reduction of poverty Mbaya (2003).

Achieving long-term food security is inextricably linked to overcoming other global crises, such as those of excessive population growth, unemployment, debilitating debt levels, undue energy consumption, environmental pollution and political insecurity - all of which have significant national and local components that impact negatively on one another (ODI, 1997, cited in Drimie & Mini, 2003). However, the direct causes of food security include poverty, ill health, regional and national conflict and natural disasters. According to Mbaya (2003), food security has so far affected over 15 million people in Africa in forms ranging from the lack of access to food to malnutrition and famine.

In South Sudan, large populations, who are concentrated mainly in the rural areas, face on-going food security and poverty. Food security in the region is intensified by adverse weather conditions, such as droughts, which impact negatively on farm-level food production (Van Rooyen, 2000). Many causes of food security exist in Africa (Drimie & Mini, 2003), including macro and micro issues, which are basically either directly or indirectly, caused by the relationships maintained with other countries. Examples of such issues are political instability, poor economic governance, poverty and a lack of sustainable household income.

2.3.1 The micro dimensions of food security

Food security and economic growth interact with each other in a mutually reinforcing process over the course of development. It is only in modern times that entire societies have achieved food security.¹ Earlier, only privileged members of society were able to escape from chronic hunger and the constant threat of famine (Fogel, 1991). Many countries in the developing world, especially in Africa and South Asia, have not managed this escape. In these countries, understanding the factors that cause widespread hunger and vulnerability to famines, and the mechanisms available to alleviate their impact, remain important intellectual challenges. Governments can do many things to improve food security at the household and individual level and most countries in Africa have programs to do so.

Rural education accessible to females and the poor, family planning and child-care clinics in rural areas, nutrition education, and extension specialists helping to improve home gardens are just a few of the possibilities (Block et al. 2004). Most of the literature on food security deals with approaches at this level, but problems of definition, measurement, project design and management vastly complicate strategies that rely on direct household interventions (D.G. Maxwell 1996). Without the buffer of Engel's Law, consumers in poor countries are exposed to continued hunger and vulnerability to shocks that set off famines (Anderson and Roumasset, 1996). And yet, several poor countries have taken public action to improve their food security. The typical approach reduces the numbers of the population facing daily hunger by raising the incomes of the poor, while simultaneously managing the food economy in ways that minimize the shocks that might trigger a famine. These countries, some of them quite poor, have managed the same "escape from hunger" that Fogel documents for Europe during the 19th and early 20th centuries.

The rate and distribution of economic growth are primarily matters of macroeconomic and trade policy (once asset distributions are given as an initial condition). Although

there is now widespread controversy over what role African governments played in stimulating growth and channeling its distribution, there is no disagreement that high rates of savings and investment, coupled with high and sustained levels of capital productivity, in combination with massive investments in human capital, explain most of the rapid growth that occurred up to 1997 (World Bank, 1993; Timmer, 2004a). Growth that reached the poor—what is now termed “pro-poor growth”—was one component of the food security strategy.

In the second element of the strategy, Asian governments sought to stabilize food prices, in general, and rice prices, in particular. Engel's Law ensures that success in generating rapid economic growth that includes the poor is the long-run solution to food security. In the language of Dreze and Sen (1989), such economic growth provides “growth-mediated security.” In the meantime, stabilization of food prices in Asia ensured that short-run fluctuations and shocks did not make the poor even more vulnerable to inadequate food intake than their low incomes required (Timmer, 1991, 1996). For food security in this region, the stabilization of domestic rice prices was in fact feasible in the context of an expanding role for an efficient private marketing sector. The resulting stability was not an impediment, but was actually conducive to economic growth.

2.3.2 Economic Welfare Challenges

The rate and distribution of economic growth are primarily matters of macroeconomic and trade policy (once asset distributions are given as an initial condition). Although there is now widespread controversy over what role Asian governments played in stimulating growth and channeling its distribution, there is no disagreement that high rates of savings and investment, coupled with high and sustained levels of capital productivity, in combination with massive investments in human capital, explain most of the rapid growth that occurred up to 1997 (World Bank, 1993; Timmer, 2004a). Growth that reached the poor—what is now termed “pro-poor growth”—was one component of the food security strategy.

The agricultural revolution that swept through Africa since the 1960s dramatically improved the living standards of most people, despite the setbacks from the African financial crisis in 1997. By the 1990s, far fewer people were trapped in poverty than in the mid-1960s, food security had been enhanced by surpluses available in an expanded African rice market, economies had become highly diversified as the manufacturing sector had outgrown the agricultural sector, and export-oriented companies became competitive in international markets.

The historical and comparative lessons from African are clear. They show conclusively that growth of the rural economy has helped the poor more than growth in the urban industrial sector and that such growth has also contributed to more rapid growth in the overall economy (Huppi and Ravallion, 1991; Ravallion and Datt, 1996; Ravallion and Chen, 2004; Sumarto and Suryahadi, 2003; Fan, Thorat and Rao, 2004; Timmer, 1997, 2004b). From the point of view of food security, changes in opportunities.

Exchange rate policy reform, which has been the main focus of structural adjustment programmes adopted by many African countries, has aimed to improve the external competitiveness of their economies. However, according to Wiggins (2003), the development models and strategies followed have disappointed and failed across the main production sectors of Southern African economies, namely mining, industry and agriculture. Although most African countries have adopted structural adjustment programmes, which has led to improved growth and performance in the export sector, the adoption of such programmes has also led to higher rates of unemployment and poverty (Siphambe, 2004). The performance of the economy in terms of growth alone is, therefore, an inadequate measure of food security in the region. In order to be able to assess the entire picture, the issues of poverty, income distribution and general human development have to be examined.

2.3.3 The primary role of economic welfare

Rapid economic growth has been the main vehicle by which most African countries have reduced poverty and enhanced food security (World Bank 1993). Most countries have averaged growth rates in per capita incomes of between 3 and 4 per cent per year, rates that double living standards every two decades or so. When such growth reaches the poor (that is, if income distribution does not deteriorate significantly during the growth process), poverty rates can fall from over one-half the population—the poverty incidence in extremely poor countries—to less than one-eighth of the population in just one generation.

2.3.4 Lack of food entitlement (poverty)

Sen called poverty the lack of food entitlement (in reference to the lack of access to land, credit, income and family support systems), which was found to be the major cause of famine and hunger (Sen, 1977, cited in Rukuni & Eicher, 1988). Sen challenged the prevailing view of the time that famine was caused primarily by a food production shortfall, later expanding his entitlement thesis in his widely read book, *Poverty and Famine*. Sen came to realize that people starve because of a food entitlement failure, not because of a food availability failure. This section identifies a lack of food entitlement (poverty) as a phenomenon, describes its major causes, and reveals the effect that it has so far had on food security in the region.

Starvation is the phenomenon of some people not having enough food to eat - it is not the characteristic of there not being enough food to eat (Sen, 1981). Starvation statements can be translated into statements of ownership of food by persons. Therefore, a relationship of ownership is one kind of entitlement relation. According to Sen (1981), entitlement relations accepted in a private ownership market economy typically include the following:

Trade-based entitlement , in terms of which one is entitled to own what one obtains by means of trading something one owns with a willing party (or, multilaterally, with a

willing set of parties); Production-based entitlement , in terms of which one is entitled to own what one obtains by way of arranging production using one's own resources, or by way of the resources hired from willing parties meeting the agreed conditions of trade; Own-labour entitlement , in terms of which one is entitled to one's own labour power, and thus to the trade-based and production-based entitlements related to one's labour power; and inheritance and transfer entitlement , in terms of which one is entitled to own what is willingly given to one by the legitimate owner thereof, which can take effect after the latter's death (if so specified by him/her). Sen's 'entitlements approach' provides a framework for analysing the relationship between rights, interpersonal obligations and individual entitlement to things (ODI, 2001, cited in Drimie & Mini, 2003).

2.4 Summary

The available data and the literature on the different issues addressed in this chapter have resulted in the following findings: Food security can be defined at individual and household levels, at national level, and at regional level. These three levels are interrelated, as the regional food security status cannot be assessed without considering the individual, household and national levels. The chronological perspective on the agricultural

modernization concept has experienced three basic changes since the 1970s: at the level of analysis, from the global and national level to the household and individual level; or in the scope of analysis, from a narrow 'food first' perspective to a broader 'livelihoods' perspective; and o in the assessment of food (in)security, from measured indicators to self-reported perceptions. Intense droughts and massive floods were the major causes of extensive harm to people, and damage to their property, livestock and food crops.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter explains the methods that the researcher used to select the geographical areas, from which research was carried out and methods of selection of respondents. It also explains the methods that were used to collect, process, and analyze data.

The methodological reference amongst the differential analysis creates a more formidable specification as far as key food security limits are concerned. This subdivision explains the key locations through which the study was conducted and the familiarities related to these study areas.

3.1 Research Design

The study was a survey in the form of cross-sectional study in which data was collected once across a population through sampling. A survey design was used because Surveys are relatively inexpensive (especially self-administered surveys). Surveys are useful in describing the characteristics of a large population. No other method of observation can provide this general capability. Consequently, very large samples are feasible, making the results statistically significant even when analyzing multiple variables. Many questions can be asked about a given topic giving considerable flexibility to the analysis. Both quantitative and qualitative research design was used during the investigation. The importance of quantitative techniques was to generate numerical data, while qualitative techniques was used to obtain descriptive evidence to explain certain quantitative phenomenon.

3.2 Area of Study

The study was carried out in Juba County district in South Sudan. The region serves as the permanent agricultural destination in South Sudan. The study was based in Juba County because it has a conducive environment for farming and various developments in agriculture have already been established there.

3.3 The study population

The area of study covered major agricultural streams in Juba County district including key agricultural and financial institutions as well as major markets that agricultural products are being sold. The research area comprised of several locations where farmers do carry out farming activities and the population of the study had a total population of 100 respondents from 4 locations and the average classification ratio of 4:1 (factored alongside the major mathematical interpretations). The participants were farmers from several farms and upcoming enterprises whose input in the growing trend established was seen to be extensive as with regard to distinct monitoring and evaluation of these outgrowths. The population further involves entrepreneurs who are seen to be playing a major role in enhancing agricultural developments in the region. . Additionally, financial experts as well as local administrative leaders play a major role in ensuring that the researcher obtained relevant and important information for the research.

3.4 Sample Design

From this study, the entire process of sampling data required proper analysis of information. In view of the complex nature of the research, the work evidenced samples of data relevant to the research. The sample consisted of 100 respondents. This includes 50 small scale farmers, 33 administrative officers, 8 Agricultural experts and 7 economic experts. Simple random sampling was used to select respondents to avoid biased information.

3.5 Data Collection Methods and Instruments

3.5.1 Methods

The researcher collected data from both primary and secondary sources.

(a) Primary Data

This was got from the results obtained the findings of the study in the study organizations.

(b) Secondary data

This was got from journals, books, magazines, internet, news papers and any other information that is talking about food security.

3.5.2 Instruments

The following data collection instruments were used:

(a) Questionnaire

The questionnaires were administered personally by the researcher to the respondents from the various departments in the organizations under study.

(b) Interviews

According to the research, structured interviews were conducted with financial experts and farmers in Juba County. Interviews were used because they provide additional information for triangulation purposes. (Thomas and Mueller, 2000)

(c) Documentary Review

This included detailed review of already existing literature. The tool was selected because it gives the historical data, which was used for future reference.

3.6 Procedures

The researcher started with writing the proposal and was approved; he used the pre-test of the research instruments. The researcher presented an introductory letter from

the University outlining the objectives of the study to the Juba County district administration. The researcher proceeded to various local leaders with copies of the endorsed introductory letter seeking permission to carry out the research in specific communities. After which the researcher went to collect data using the instruments from the respondents by moving from one farm to another. He did the data analysis when the work of collecting data is done. Finally the researcher submitted the report of the study findings to the college of Humanities and Social Sciences for the fulfillment of the award of degree of Bachelor of development studies for examination.

3.7 Data Analysis

3.7.1 Quantitative Data Analysis

Quantitative data analysis was done by the use of various applicable software packages. The technique for quantitative data analysis was the frequency distribution and percentages, which was used to determine the proportion of respondents choosing the various responses. This was done for each group of items relating to the research questions. The proportions showed the diverse views of farmers and financial experts on the various farm modernization and economic welfare issues.

3.7.2 Qualitative Data Analysis

The qualitative data from interviews and secondary documents was analyzed using content analysis and logical analysis techniques.

3.8 Ethical Consideration

This entailed first getting a letter of introduction that commission one to go for a study. It was stipulated that before going to the field, the researcher would first get a letter of introduction from the department commissioning to go and carry out the research with a purpose. Besides the researcher first booked for the respondents before the questionnaires are delivered.

3.9 Limitations of the Study

Collection of data in South Sudan is very difficult. Problems such as the swearing of an oath of secrecy and indifference on the part of interviewees and respondents are likely to be one of the limitations to the study. The absence or inaccessibility of reliable records and reports on farming activities within the past ten years limited the research investigation. However, the researcher solved these problems by involving the administrations so that no respondent was giving out un-authorized information.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND PRESENTATION

4.0 INTRODUCTION

The relevance of food security in the fight against poverty has been a success story in most struggling households. The survey on households concludes that the relevant strategies carried out to create a borrowing culture within the households have provided some positive feedback in the last research references (World Bank, 2007). Food security in this regard has largely targeted small enterprises such as entrepreneurships, farmers and various women groups. The credit schemes provide a definite compliance policy support within institutions and comprehensively engage the beneficiaries in obtaining their satisfaction.

In the analysis, the focus was majorly to get proper understanding of the relative responses from the respondents and analyze this data to relay on output. The empirical findings would form the basis for final computation and analysis of the findings. In the later stages, the data would be critically interpreted, discussed and then recommendations are made (Heidhues, 1995).

4.1 DEMOGRAPHIC INFORMATION OF THE RESPONDENTS

The statistical research shows how gender distribution has been achieved. Distribution along the gender lines are based on the availability of relevant facts supporting this range of people who directly or indirectly benefit from food security programs which are important in economic welfare.

4.1.1 Age of the Respondents

Table 1: *The demographical representation of the respondents*

Age	Frequency	Percentage
15-30	50	50
30-45	24	24
Above 45	26	26
Total	100	100

Source: Primary data

Table 1, shows the ages of the respondents and provides a platform for varied comparisons of the age ranges of those interviewed. The largest category, age 15-30, 50(50%), 30-45, 24(24%) and above 45, 26(26%) which indicates a fair distribution of age among the respondents in the study.

4.1.2 Educational Background of the Respondents

Table 2: *The institutions classifications*

Institution	Frequency	Percentage
Primary	15	15
Secondary	20	20
University	40	40
Masters	25	25
Total	100	100

Source: Primary data

4.1.2 Educational Background of the Respondents

The educational background of the respondents is analyzed to provide relevant educational diversities among the various respondents in the study. Respondents with primary education amounted to 15% of the total study, with secondary education were 20%, University and masters levels were 40% and 25% respectively.

It is observed therefore, from the table that most of the respondents interviewed were literate and had the basic educational requirement.

4.1.3 Marital Status of the Respondents

The marital status of the respondents provides the family settings of the respondents in the study. This provides the appropriate study considerations reflecting the family composition.

Table 3: The marital status of the respondents

Marital status	Frequency	Percentage
Married	50	50
Divorced	10	10
Single	20	20
Other	20	20
Total	100	100

Source: Primary data

The study also analyzed the family setup and it showed that it comprised of both married and unmarried respondents. The total number of married respondents was 50(50%) while the single respondents were 20%. Divorced respondents amounted to 20% of the study while those respondents falling under minority classification was 20%

of the overall study. This explains that the respondents who contributed to the impact of food security were 14(35%).

4.1.4 Gender of the Respondents

The gender composition in this study is vital for carrying out the research. The balance of the composition is required as per the research ratio requirement.

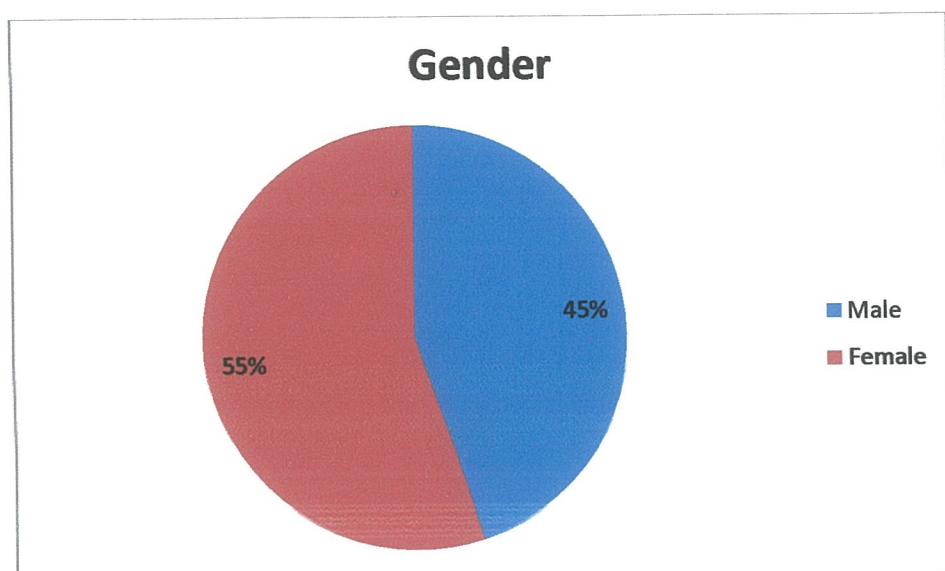
Table 4: The gender of the respondents

Respondents	Sample size (n) =100
Male	45
Female	55
Total	100

Source: Primary data

From table 4, the number of respondents interviewed varied to a greater extent. In this context, the study was sensitive to gender and had a balanced respondents with 55 (55%) female and 45(45%) male actively participating in the study. The main target in the study was women and the ideal concept was to encourage them to participate in modern farming besides working on other related areas at home as a way of improving their own financial positions. However, the selection scheme was random and no particular respondent was chosen deliberately or with purpose.

Figure 1: Gender of the respondents



Source: Primary data

4.2 Food Security vs Economic Welfare

Table 5 Food security establishment

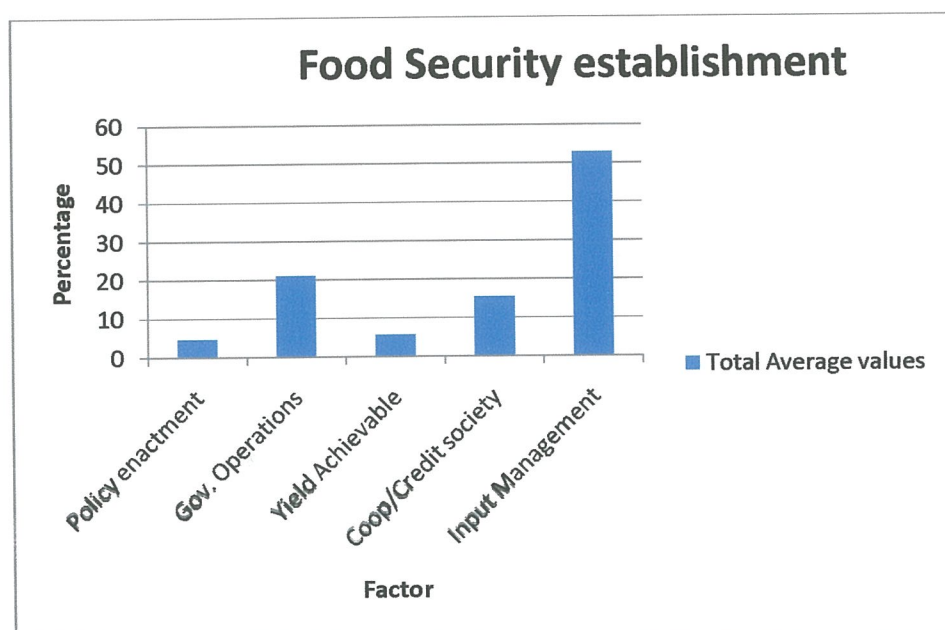
Factor	Respondent Poverty Level		Total
	Non-poor	Poor	Average values
Policy enactment	7	2.5	4.75
Government Operations	23	19	21
Yield Achievable	9	2.5	5.75
Coop/Credit society	11	20	15.5
Input Management	50	56	53
Total	100	100	100

Source: Primary data

The data analysis of table 5 provides an estimated food security and its economic welfare perspective as above. From the table, policy enactment relevant to food

security constitutes 4.75% average for poor and non poor households. Government operations amounts to 21% average which indicate that the government plays a huge role in the implementation of various food security issues. The role of the credit cooperative societies in enhancing food security and improving household poverty is equally prevalent in this study and it constitutes 15.5% of the overall study. Input management is an important strategy in food security and this is encapsulated in the study through its robust feedback, 53% of the study enhanced in this position.

Figure2: Showing a summary cumulative food security



Source: Primary data

The figure 2 above shows the cumulative food security aspects and the input management takes the largest share (53%) followed by government operations with 21%. From the graph we can establish that food security is still facing several challenges and in spite of the policies enacted, farmers need better training and aided managerial skills to improve their livelihoods and hence economic welfare.

4.3 Agricultural Policy and Economic welfare

The role of agricultural policies in defining and creating better economic welfare concepts is universally accepted. Agricultural policies can provide powerful tools to promote economic growth; however, South Sudan is according to the respondents benefiting hugely from reforms, and significant changes within its mainstream market fronts.

The analysis of the quantitative restrictions in terms of domestic market is evaluated and trade openness in terms of the specific/total agricultural exports would be ultimately achieved if proper agricultural policies are fully applied.

Table 6: Agricultural Policy economic welfare

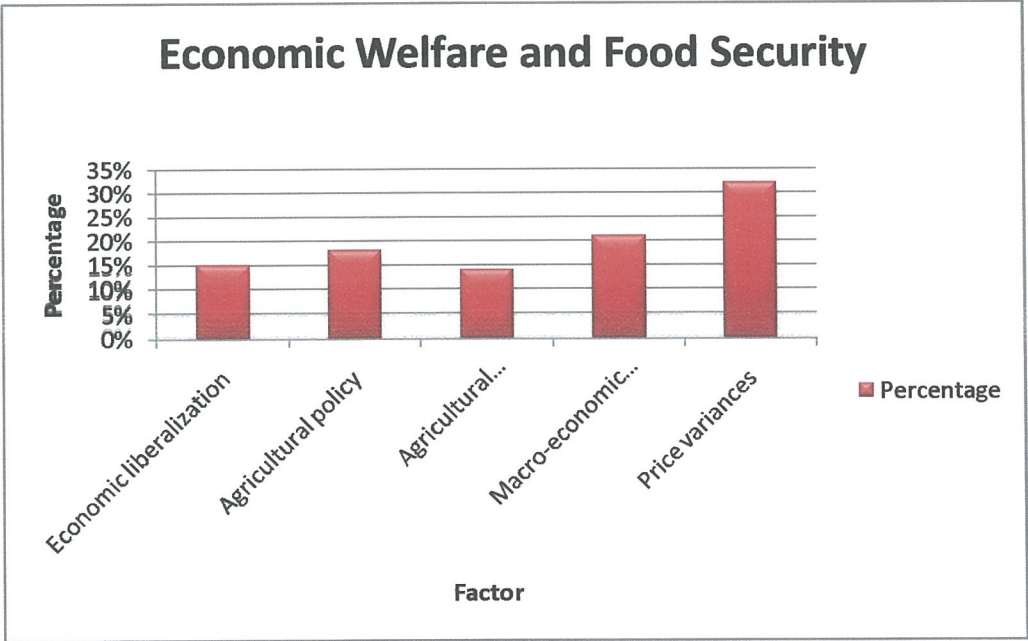
Factor	A	SA	D	SD
Economic liberalization	15	40	20	25
Agricultural policy	28	25	21	26
Agricultural commercialization	33	25	15	27
Macro-economic reforms	29	29	22	22
Price variances	32	40	13	15
Total	100			

Source: Primary data

The table above shows policies regarding price variances amounted to 32% of the study carried out while macro-economic reforms and agricultural policies were 29% (A) and 25% (SA) respectively. Liberalization of domestic markets, through removal of quantitative restrictions on trade was 15% (A) and 40% (SA) and opening up of economies to internal trade opportunities is often a key step in starting or accelerating

the process of commercialization. However, the opening up of markets also exposes producers to increased risk due to the greater short term volatility of world prices. From that perspective, 45% cumulatively for disagree and SD was evident. Governments have historically intervened heavily in domestic markets to protect and stabilize the prices of agricultural commodities, with the result that domestic producer prices have varied substantially less than international prices.

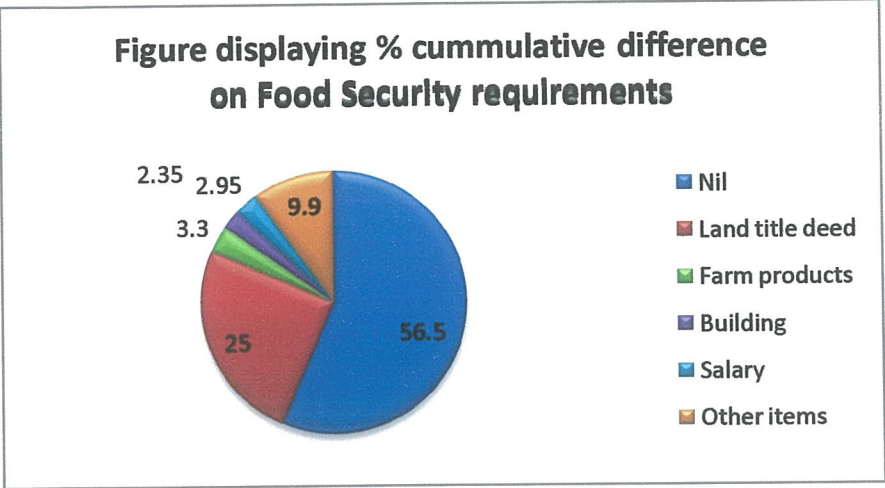
Figure3: Graphical analysis for Economic welfare and food security



Source: Primary data

The research figure above shows that price variances as explored in the study amounts to 32% of the study. Agricultural policy in the study is significant and fully amount a remarkable potion (18%) and this explains that even economic liberation (15%) is equally compliant with the development of ideal agricultural policies.

Figure 4:Showing the cumulative policy issues in relation to food security



Source: Primary data

Figure 3 above provides a summary distribution characteristic of agricultural requirement scheme for credit borrowing for farmers wishing to improve agricultural productivity. This has been evidenced by scale distribution shown on each segment.

4.4 Household modern agricultural Utilization

The poor households were able to use various food security platforms to improve their agricultural output. For instance, the mean total averages distributed through the financial period was marginally very high and was comparatively enhanced by the level of modern farming practices as evidenced by the respondents in this study.

Table 7 showing how agricultural facilities were utilized by the households

Source viability Organ	A	SA	D	SD
Consumption	30	35	20	15
Small scale businesses	28	32	15	25
Agricultural based activities	33	25	20	22
Educational utilization	45	10	20	25
Health	25	35	15	25
Total	100		100	

Source: Primary data

From table 7 above the utilization of the agricultural equipment as per the respondents acquisition response was diverse. The small scale business factor was 60% of the study while agricultural based activities constituted 58% of the study with 33% and 25% Agree and SA. The utilization of agricultural equipment was largely positioned as the most relevant way of elevating people to a more friendly financial position. However, educational utilization of information had strong indictment for Agree at 25%, SA was 35%. From the study, 15% and 25% disagree and SD. The overall trend explains that the core values underlining basic understanding of the utilization of agricultural facilities is optimally attained.

This shows that a huge composition of households that fully rely on agriculture and the acquisition of economic facilitation is an important factor in their farm related activities.

4.5 Economic welfare and Food security

The acquisition of various agricultural equipments to improve their agricultural output has been hugely significant. In most households as evidenced by the research, male dominance was an important factor aiding

the acquisition of loans (Mosley, 1998).

Table 8: The distribution of support finance for agricultural equipment

Factor	A	SA	D	SD
Source viability Organ	35	35	10	20
Community Credits	25	35	25	15
Cooperative Loans	35	22	23	20
Non Governmental Bodies	40	20	27	13
Employers	35	25	14	26
Formal Financial bodies	35	30	11	24
Friends/personal	33	26	18	23
Total	100		100%	

Source: Primary data

From table 8 above, the distribution of borrowed money to develop program for sustaining food security. Regarding the use of viable organs, 35% all ups Agree and SA respectively while 10% and 20% disagree and SD respectively. This implies that many respondents felt that viable organizations are supportive in any process of managing food security situation in the country. Regarding community credits, cumulative 60% for A & SA provided the ground equipment and the ratings by cooperative societies and their loan acquisition, (23%) is fundamentally positive.

4.6 Economic Welfare Factors for food security

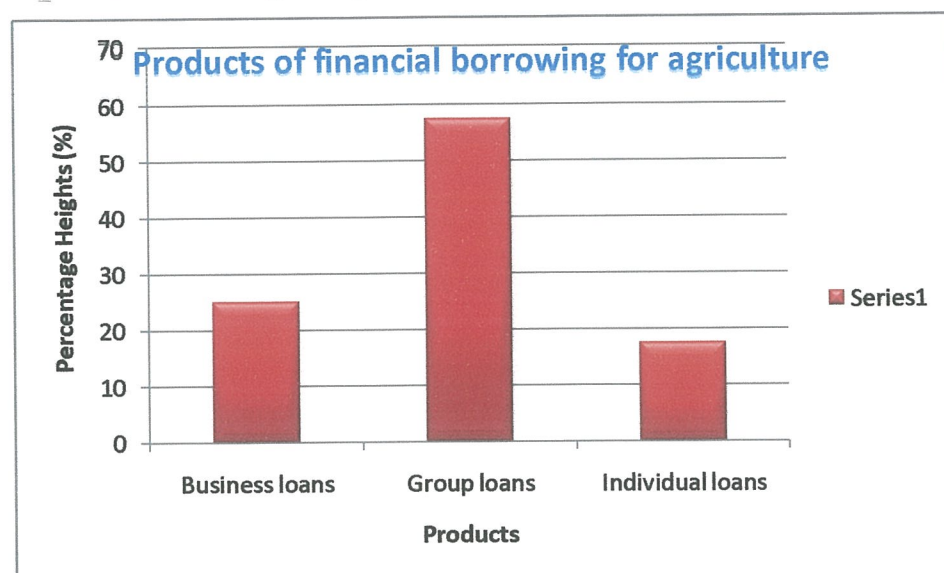
Table 9: showing the products offered

Item	A	SA	D	SD
Business loans	25	40	18	17
Group loans	55	30	5	15
Individual loans	40	40	10	10
Total	100		100	

Source: Primary data

From table 9 above it can be analyzed that group loans for individuals and small entrepreneurs forms the majority of the total loans advanced- that is 55% strongly agree. Business loans forms 25% who Agree and 40% SA while a small group of 18% and 17% disagree and SD respectively. However, regarding individual loans, Agree and SA was 40% all ups while 20% all ups disagree and SD, implying that individual loans were favoured in terms of the general welfare expansion in South Sudan.

Figure5: Showing the products offered to support agriculture



Source: Primary data

From the chart above, the cumulative group loan is the favorite product offered by most financial institutions. The group loans amounted to 55% of the product levels reached. This is as a result of the credit institutions major objective of promoting small and micro entrepreneurs. Also attractive credit management policy associated with this category for example the group guarantees each other and so collateral is not needed. Group loans are also relatively cheap as far as transaction costs are concerned. The food security also aims at promoting the marginalized group in the society and so they encourage them to form small groups to enable them do some economical activities.

4.7 METHODS OF AGRICULTURAL EQUIPMENT DELIVERY

From the study, agricultural equipment advanced is either delivered to groups or individuals. In particular, Individual equipment are delivered to individuals based on their ability to provide the MFI with assurances of proper use and management and some form of security. Groups support which forms 55% of the advanced is targeted for groups- that is either individuals who are members of a group and guarantees each other proper support.

4.8 Changing agricultural production systems

There are five issues at stake in this area. First, an increasing commercial orientation of production systems is expected due, inter alia, to rapidly rising urban food demand, changing consumption patterns and the increasing integration of domestic and international markets for agricultural products. Some of the resulting changes include: larger operational holdings; reduced reliance on non-traded inputs; and increased specialization of farming systems. While the speed of these transformations differs substantially across countries, they are all moving in the same direction.

Table 10: showing the Classification of changing agricultural production systems

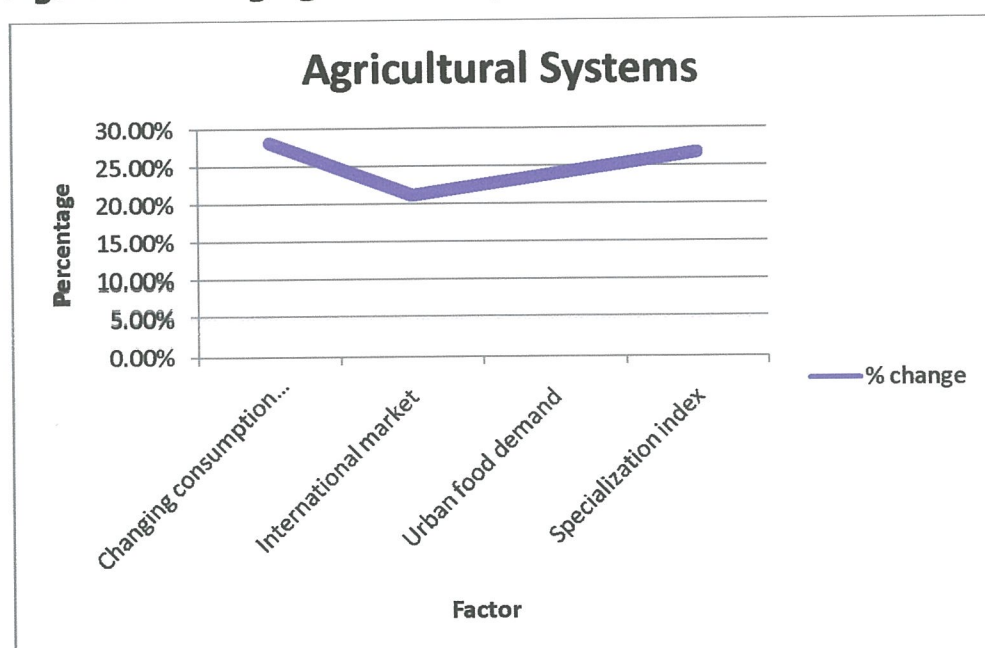
Factor	A	SA	D	SD
Changing consumption pattern	20	30	20	30
International market	30	25	35	10
Urban food demand	27	43	20	10
Specialization index	23	45	20	12
Total	100		100	

Source: Primary data

According to table 10 above, the changing consumption pattern is 20% of the total agreeing while 30%SA. Further 20% and 30% disagree and SD and this demonstrates from the perspective of improving production system that all response provided universal and balanced responses. The international market constitute 30% of the agricultural production system (A) while 25% SA. From the analysis, it is argued by 35% on the contrary while 10% SD. As economies grow, the returns to intensive production systems that require high levels of family labour are generally lower than

those from exclusive reliance on purchased inputs. With the expected rise in operational holding size, the ability of the household to supply adequate quantities of non-traded inputs declines. The urban food demand rose to 27% according to various respondents indicators.

Figure6 showing Agricultural systems



Source: Primary data

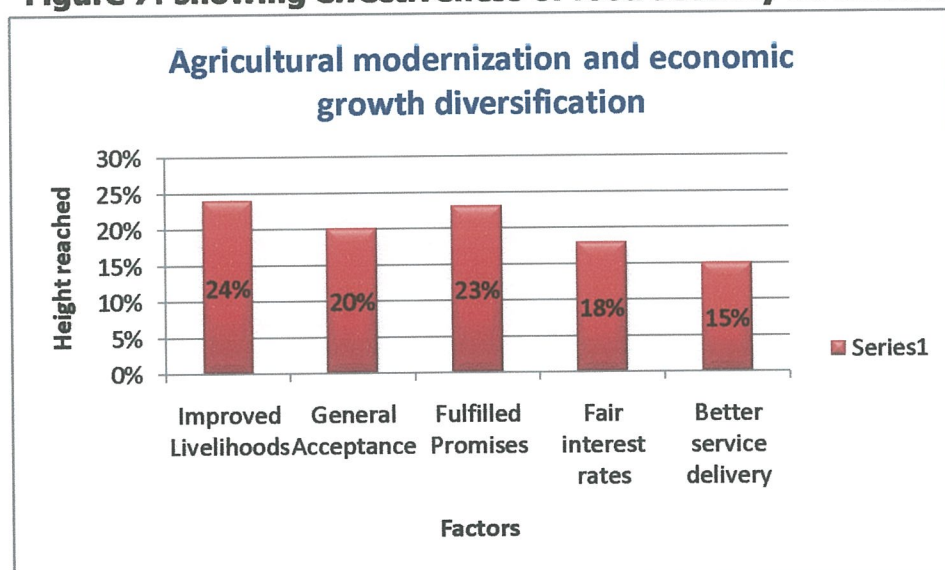
According to figure 5 above, farm decisions become increasingly responsive to market signals, domestic as well as international, and less driven by traditional practice. While at a regional or sub-regional level, trends towards diversification out of cereal monoculture systems are being observed, at the individual farm level the trend is towards product specialization.

4.9 Effectiveness of Agricultural Machinery to Small Households

The provision of machinery to small households and other small scale entrepreneurs is a success story according to the respondents. It was established from the research that approximately 85% of the respondents confirm that they got an improved returns

one year after acquiring the machinery. From the respondents it was also noted that the loans they acquired were flexibly paid back in agreed terms where the interest rates were affordable and equally all other metrics were equally manageable. Food security were found out to be 90% effective in playing its role of disseminating information to client and providing relevant data required for proper credit management strategies. The bank has been able to identify delinquent borrowers through its fast growing loaning scheme and this has enabled them to do a close monitoring of all its customers. Through there outreach services, food security have been able to enhance economic growth in South Sudan.

Figure 7: showing effectiveness of food security on small households



Source: Primary data

From the respondents' analysis, the respective heights reached demonstrate how food security's have been positively charged in supporting vulnerable groups. The highest provision in the row, according to the respondents is that the role of food security in achieving the millennium development goals is to eradicate poverty. A height of 24% has clearly shown how this has been achieved. Other important factors such as fulfilled promises (23%), generally accepted by the community (20%) and the ability to meet

people's requirements (15%) where the major factors aiding the functioning of these institutions as per the research carried out.

CHAPTER FIVE

FINDINGS AND CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

The relationship between food security and economic welfare is fundamentally ideal. Thus, entering the food system on a competitive basis is problematic for small farmers because of physical investments needed to enter but also because of the transactions costs associated with the new agricultural market. The increasing disconnects between the modern food system and the established social networks and traditional institutions tend to aggravate the costs of market participation. Farmers cannot enter markets when the value of participating is outweighed by the costs of producing food. Therefore there is an important relationship between food security and economic welfare, if all factors are kept constant.

These are mainly high income countries with relatively small rural populations. Their agriculture sectors are highly commercialized, vertically integrated and globalized. For these countries the big challenge was to create new opportunities for rural incomes while liberalizing trade. In this context the non-commodity roles of agriculture, such as biodiversity conservation, agro-tourism, carbon sequestration, provide opportunities for the emergence of markets. Preserving rural societies and landscapes becomes important not only for political and nostalgic reasons, but also as a matter of economics. This could become an increasingly important trend in middle income countries as they reach the end of the transformation process.

5.2 Findings

5.2.1 Food security and economic welfare

The prospect of exploring the relationship between food security and economic welfare is hugely dependent on the level of relationship between the two.

Designing food and agriculture policy is substantially more complex in a globalized world than it was in a world of relatively closed food economies. While, chronic hunger and poverty continue to be daunting problems in much of the developing world, globalization brings about new policy challenges both for countries well into the process of agricultural transformation and for countries at the low end of the transformation process. The traditional policy agenda for promoting agricultural growth and economic welfare needs to be redesigned and adapted to the new realities of an increasingly inter-connected global economy.

Hunger and poverty reduction requires a twin-track approach which combines, (a) direct interventions and social investments to address the immediate needs of poor and hungry (social safety nets, conditional or unconditional cash transfers, health interventions, food and nutrition programmes) with (b) long-term development programmes to enhance the performance of the productive sectors (especially to promote agriculture and rural development), create employment and increase the value of the assets held by the poor (physical, human, financial). Coherence between policies and investments to increase productivity and economic efficiency and those in the social sectors improves the effectiveness of both. Coherence is also needed between agriculture and trade policies in order to achieve an appropriate balance between food imports and domestic productivity growth.

5.2.2 Agricultural Policy and economic welfare

The relevance of agricultural policies and economic welfare is hugely significant and it derives important platform for defining and improving household levels. Some argue

that the benefits of low food prices are as easily accessed by trade as by investing in domestic agriculture (Sachs, 1997). This argument ignores the strong historical connection between domestic food production and consumption because of the difficulty and expense of transporting and marketing food staples in rural areas, far from ports and efficient transport links (Timmer, 2002).

From the study, most farmers are fully compliant with specific policies and laws that are aimed at improving the conditions of farmers with regards to improved agricultural output. Time factor, according to the respondents is a very important factor aiding policy development and application. The agricultural institutions provide a proper coverage scheme for the households and this has even further encouraged them to continue acquiring better equipment. This is because the microfinance institution has adopted a strategy whereby for one to get better services, proper enactment of subsequent agricultural developments is fundamentally relevant. A few of the farmers however are not uniformly convinced because the policy structures are synonymous with changing economic welfare trends.

5.2.3 Relationship between Food security and economic welfare

The relationship that exists between food security and economic welfare is arbitrarily based on enhancing quality of life and on equal sense ensuring that farmers benefit from improved modernization policies. Enhancing food security in the rural areas entails improvements in the productivity of smallholder agriculture. In the first instance, enhancing local food supplies contributes to improved household nutrition and thereby contributes to labour performance improvements.

In the long term it broadens participation in market-led growth. Promoting sustainable use of natural resources, improving rural infrastructure, research and communications, facilitating the functioning of markets and enhancing rural institutions are integral parts of the strategy.

Productivity-induced agricultural growth has a wider impact on rural areas through the strengthening of off-farm activities, rural employment and wages. This therefore moves the society, region and country, onto the agricultural transformation trajectory.

It was found out from the study that through offering its credit products, it has made it possible for the food security to achieve its goals as a development organization in financing the needs of underserved markets as a means of achieving the desired objectives.

5.3 CONCLUSION

Harnessing the best of scientific knowledge and technological breakthroughs is crucial as we attempt to “retool” agriculture to face the challenges of an increasingly commercialized and globalised agriculture sector. The primary objective of the research system remains to generate new technologies that sustainably improve productivity and farmers’ income.

Governments have a difficult task to perform: on one hand, continued food security needs to be assured for populations that are growing in absolute terms; on the other hand, research and infrastructural investments need to be made for diversification out of the primary staples.

5.3.1 Food security and economic welfare

This research has been correlated with the availability of better food security prospects for the poor households who are destined to benefit from better equipment that would ultimately improve the economy. From the study it can be concluded that for any agricultural institution need to fully embrace proper prospects of agriculture and to survive in the market it must have well defined agricultural policies.

Food production in Africa has had increasing number of small scale farmers in the recent times. This has been as a result of well designed loan packages and favorable credit terms. As result of well laid down policies on credit management controls the number of defaulters in these institutions has greatly reduced.

5.3.2 Agricultural Policy and economic welfare

Agricultural policies have made it possible for the institutions to meet its key lending and poverty alleviation goals. Further to that, they have additionally invested in educating these households about the importance of repaying their loans on time. This factor has aided the continued borrowing culture of these households and has generally improved the provision of loans among the beneficiaries. The management information system of several food production fundamentals is computerized.

This factor has made it possible to implement the agricultural management policies. The food production approaches have therefore become successful in their service provisions. These services have included disseminating timely information to their clients about their products and credit terms. The credit department has also had an easy time tracking their creditors through their information system platform. Hence, management information system has been efficient in informing clients who pay their loan on time. The technological aspect has made it easy in analyzing the paying patterns of these households and encouraging them to continue accessing credit has been an additional factor that aims at fulfilling the objectives of the role played by food

security in poverty alleviation (Buckley,1997). This vital role has boosted the relationship between the lenders and the borrowers and their general working relationship has improved marginally. Information dissipation to the households has been achieved through proper credit management strategies.

5.3.3 Relationship between Food security and economic welfare

Both substantial crop-specific research and system level research effort was required to provide farmers the flexibility of crop choice. Crop-specific research includes increases in yield potential, shorter duration cultivars, improved quality characteristics and greater tolerance to pest stresses. System-level research would include land management and tillage systems that allow for shifts of cropping patterns in response to changing incentives and farm level water management systems that can accommodate a variety of crops within a season. Also important at the system level is research on the carry over effect of inputs and management practices across crops, for instance, high insecticide and herbicide applications, or the effects of intensification in terms of prolonged water saturation, the build up and carryover across crops of pest populations, rapid depletion in soil micronutrients and changes in soil organic matter could lead to reduced productivity of rice monoculture systems over the long term. Modern science can thereby provide opportunities for enhancing input efficiencies and for developing more sustainable production systems.

5.4 RECOMMENDATIONS

5.4.1 Generating internationally accepted policy platforms

Food security should motivate farmers to improve their overall farming structure to be able to fully comply with changing farming attributes. This can be achieved through offering incentives such as repeat loans, discounts, fines and penalties, taking legal action against defaulters among others. Another way of motivating borrowers to repay is by forming joint liability groups where a handful of borrowers guarantee each other's loans.

5.4.2 Better training facilities for farmers

Food security should have timely management information systems to enable their staff to quickly identify borrowers who are delinquent through a well coordinated network that accurately reports and monitors loan repayment.

5.4.3 Better Credit award for farm management practices

Food security should be based on better access to loans and other financial resources to be able to inclusively create better farming practices. This should be an inclusion of the entire borrowing culture such as having the required security, besides showing how you intend to utilize the credit. Proper schedule should be arranged in order to determine how to effectively support starting borrowers. Additional provisions should be made to ease the process of acquiring these loans.

5.4.4 Food production regulation

Governments should fully regulate the food production so as to safeguard these small households from possible exploitation and to ensure that food security is operating towards stipulated standards. In order to reduce their exposure to risk of loans loss, these institutions should adopt some collateral substitutes like character, based lending frequent visit to the business of the client by the credit officer or have alternative forms of collateral like compulsory savings.

They should organize perfect restructuring of these operational platforms to minimize the cost per unit. They should regulate the method involved in lending; make application to appear in simplified terms for the purposes of enhanced verification. They should also make the loans to be sandwiched in a moderately acceptable approval system.

5.5 Areas of Further Research

Food security can be fully integrated into the significant performance indicators in South Sudan.

1. The overall goal food security is to increase production and increased incomes and food security among poor rural households in the programme area, and thus reducing poverty incidence in the Northern districts.
2. Future work should involve related research in developing new feeder and community roads which will improve the access to areas that are difficult for large trucks to reach and this will enhance the overall level of production. While this investment will bring new income to more remote areas, the changing trends in the overall cost of production will greatly be reduced.
3. Maintenance of programmes-financed infrastructures should be established and fully made to be compliant with the changing agricultural development frameworks. Important steps should be done to research on genetic agricultural engineering which will enhance agricultural production.

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APPENDICES

APPENDIX A

RESEARCH QUESTIONNAIRES FOR ADMINISTRATIVE LEADERS

RESEARCHER'S PROFILE

I am a third year student at Kampala International University pursuing a degree in Development Studies. I am carrying out research on the Impacts of Food security on economic welfare in rural communities in South Sudan, a case study of Juba County District, Northern South Sudan. The questionnaire is specially for academic purposes and all information received shall be kept confidential.

BASIC INTRODUCTORY QUESTIONS

Tick (✓) where necessary and (x) cross where it is not applicable.

a) What is your marital status?

Single () Married () Divorced ()

b) Sex: Male () Female ()

c) Age range; 15-20 () 21 – 24 () 25 – 33 () 33 & above ()

d) Occupation: Employed () Unemployed ()

e) Level of education: Primary () Secondary () University () none ()

Questionnaire on Food Security

Food Security	Response			
	SA	A	D	SD
There are positive factors contributing to food security				
The roles/positive roles that u have played to influence the growth in food security influence on economic welfare.				
There has been substantial impact of food security on the welfare of the people in this region				
Much has been done to improve food security and improve the overall agricultural output.				
Food security and welfare of the people are related from own perspective				
South Sudan should invest more in ways that will improve the food situation in this region				
Economic Welfare				
If there is perfect competition a welfare optimum will always be achieved in the economy				
There are substantial factors in South Sudan that would help in enhancing welfare situations in the country				
Establishment of better economic welfare situation involves more than just food security in South Sudan				

APPENDIX B

INTERVIEW GUIDE

1. What could be the possible solutions towards the problem of people suffering from the effects of poverty especially on general livelihoods in South Sudan?
2. From an experienced point, how has food security affected your economic welfare? Has this been a positive trend or not. Explain in the details?
3. How has the government of South Sudan help the general public to understand the effects of food security?
4. What is the approximate number of people who die every year due to hunger related cases?
5. In the previous years, how has the trend of food security and+ economic welfare been implemented in South Sudan?
6. How has the economy been influenced by food security in South Sudan? And are you satisfied with the way the government is handling food related issues.

APPENDIXD
THE TIME FRAME OF THE STUDY

ACTIVITY	TIME IN MONTHS			
	1	2	3	4
Proposal writing				
Data collection				
Data analysis				
Submission				

BUDGET OF THE STUDY

ITEM	AMOUNT IN US DOLLARS
Typing printing	\$100
Air time	\$50
Transportation	\$600
Stationery	\$120
Accommodation and Food	\$870
Literature Collection	\$300
Miscellaneous	\$450
TOTAL	\$2500