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DETERMINANTS OF BANANA FARMING GROWTH IN SOMALIA (CASE STUDY: AFGOYE AND JANALE DISTRICTS OF LOWER SABELLE REGION)

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ABSTRACT

The study was guided by the following research project specific objectives that are assessing the effects of civil war, land tenure investment and infrastructure on the banana farming growth in Afgoye and Janale Districts of Lower shabelle region. This study applied descriptive research design and statistical analysis. The target population was agrarian community in Afgoye and Janale target areas. The study population was 85 persons from different social group who had been involved in Banana sector directly. Simple random sampling technique was used to select the sample to be included in the study where the sample of 70 farmers was chosen. The study employed questionnaires, semi structured interviews to collect primary data. The questionnaire comprised of both open and close-ended questions which generated required quantitative data. Quantitative data was coded and entered into statistical package scientists (SPSS Version 20.0) and analyzed using descriptive statistics and statistical analysis. Descriptive statistics involved the use of absolute and relative (Percentages) frequencies, measures of central tendency and dispersion (mean and standard deviation respectively), coefficient correlations and regression analysis. Quantitative data was presented in the tables with relevant explanations. The study established that there is correlation between promotion of peace, improving land tenure system, improving infrastructure, encouraging the local and foreign investment and increase in banana farming growth productions. The study recommended that there was need for security improvement, government improvement on land tenure policy, massive support to infrastructure development, and promotion of local and foreign investment to the banana sector to realize its full growth.

Keyword: *Civil War, Land Tenure Investment, Infrastructure, Banana Farming*

INTRODUCTION

The banana industry is an important part of the global industrial agro-business. Most bananas go into the export and international trade for consumption into western countries. They are grown on banana plantations primarily in Latin America and Caribbean as well as Central and South America. In 2015, global banana exports, excluding plantains, registered the first decline since 2010 after having reached an unprecedented peak of 18.6 million tonnes in 2014.The global import volume of bananas stood at 17 million tonnes in 2015. The two largest net importers, the European Union and the United States, saw moderate growth in 2015, and reached 31 percent and 27 percent of the total global import volume respectively.

Africa's exports, which accounted for 3.9 percent of global banana shipments, grew by 2.4 percent in 2012 as exports reached 649 000 tonnes. Côte d'Ivoire, the largest exporter in the region, shipped 339 000 tonnes of bananas in 2012, or 6.0 percent more than in 2011, while exports from Cameroon, the second largest African exporter, declined by 1.0 per cent to 246 000 tonnes. (FAO, 2014). In East African Highland bananas are one of the most important staple food crops in the African Great Lakes region, particularly for Uganda, Tanzania, Burundi. and Rwanda. *Per capita* annual consumption of bananas in Uganda is the highest in the world at 0.70 kg (1.5 lb) daily per person. Including Rwanda and Burundi, consumption is about 250 to 400 kg (550 to 880 lb) per person annually (about three to 11 bananas each day). East African Highland bananas are so important as food crops, the local name *matoke* (or more commonly *matooke*) is synonymous for the word "food" in Uganda. In Somali the economy is dominated by livestock as the basis for livelihoods in most parts of the country. Given the average rainfall of <500 mm and its variable pattern, rainfed crop production whilst widely practiced is successful only in areas which have slightly higher rainfall. Significant opportunities for crop production exist under irrigation along the Shabelle and Juba valleys (CardnoAgrosystems Africa Ltd, 2010). Somalia's farming areas are concentrated in the southern part of the country, in the Gedo, Middle Juba, Lower Juba, Lower Shebelle, Middle Shebelle and Hiran regions. (CIA, 2009). Banana production in Somalia dominated the agricultural sector since the 70's. In its prime periods, the banana sector has been Somalia's second most important foreign exchange earner after livestock. It provided between 8 000-10 000 jobs in the production zones and guaranteed a steady cash-influx of up to 1 million USD per month (European Union Rural and Agricultural Temporary Association, 2003). Through an ingenious system of barrages and dams over 135,000 ha have access to gravity irrigation. In this area the Somali banana industry was flourishing as the largest exporter in East Africa with 12,000 ha under cultivation. (E.Baars&.Reidigar.A, 2008). This rather unenviable economic outlook of Somalia has worsened since the start of the civil war in 1991which also caused the collapse of central government and the associated services. During the period between 1991 and 2009 there were a series of droughts and floods. Finally the loss of the banana market to Europe and Middle east and followed by complete ban on livestock exports to Saudi Arabia and other Arab countries that has further exacerbated ailing socioeconomic problems existing in the country. Lower shabelle is rich in agricultural production. Different agricultural production systems existed in this region. The region is the highest banana producing area in the country. There are plantations and small scale farming system practiced in the area, the region is bisected by Shabelle river that provides sufficient water irrigation to the farmers along the river banks. The study targeted Afgoye and Janale districts of Lower shabelle which have been among the two most banana growing areas in the areas in the region. Furthermore, the number of academicians so far involved in the thematic area is still small and consequently coverage of the various disciplines remains patchy. The few scholars

interested in agricultural development in Somalia are faced with the problems of choosing a field of study, using efficiently the limited facilities, access to rigor data and scarce resources. The research has interest in examining the underlying factors that challenge the reemergence of Somali banana production and its role in an international market, by looking for answers to many questions over existing challenges and means to provide national academic solution to them. An agricultural researcher has to understand the agricultural industry to enable him to identify the problems and choose among them the most limiting factors (problems) to be tackled first as in many cases it is not feasible to study all the problems at once. Therefore, the researcher chosen the study of determinants of banana farming growth in Somalia, with specific on Lower shabelle region.

Somali Banana production reached its peak in 1973, when about 150,000MT of banana were produced on 9,500 ha (about 60% in Lower Shabelle region), yielding 2530MT per ha. The civil war in 1991 led to the almost complete destruction of the banana industry. During the recovery efforts of 1993-1997 in the Lower Shabelle region, the banana output reached again about 80,000MT. Approximately 65% of the total banana production in Somalia was exported and 35% went to domestic markets (European Union Rural and Agricultural Temporary Association, 2003). The banana sector was not only the second export crop before war, it was also the major employer of the local population in the cropping areas. Production in the plantations absorbed a labor force of up to a total of about 10,000nd (Miech-Chatenay, M.). Insecurity, land ownership problems and poor infrastructure coupled by lack of required investment in this sector are among major factors that are believed to have contributed to the decline of this sector, resulting changes on the crop production pattern as new comers and farmers shifted to cultivate other crops include cereals, legumes sesame, vegetables etc (FSAU, 2002) . Additionally, some other farmers including plantation owners turned their investment into other businesses. Likewise, banana exporting companies such as Somali Fruit and Somali Banana abandoned their banana exportation activities in late 1997.

Currently, with the help of International communities and donor agencies, there have been various attempts to revive the banana exports in Somalia but with little success. Banana sector has yet to reach its full potential ensuring food security, employment creation, and export earnings. There have been arguments among the scholars and banana producers regarding the existence of number of technical and capacity related constraints, that if addressed would bring the industry back to its feet, these include existence of limited skills and capacity in production processes, lack of infrastructure and technology, Post-harvest handling constraints in Somalia include problems of perishability, lack of proper storage knowledge, and a lack of proper ripening and packaging systems, limited access to finance, and poor overall market conditions made the sector incapacitated. The purpose of this study was to assess the determinants of banana farming growth in Somalia with specific focus on the challenges facing the industry, identifying the role of stakeholders and provides sound recommendation to address these challenges and their underlying causes. The study further provided insights on what needs to be done to address the noted challenges. The need for empirical research on the subject matter not only helps the academics in their future studies, but contributes to finding answers to questions such as how can Somali banana productions can be boosted and what type of strategies needed to be adopted to restore banana production's role in both regional and international markets.

Objectives of the research

To assess the determinants of banana faming growth in Lower shabelle region.

RELATED LITERATURE

Theoretical framework

General Theory on Disputes and Conflicts

The General Theory on Disputes and Conflicts assigns disputes to transitional and mature democracies and conflicts to authoritarian regimes. The First Premise of the General Theory is that there are no conflicts in democratic society, only disputes, as democracy transforms conflicts into dispute settlement mechanisms. The Second Premise is that in authoritarian regimes there are only conflicts and politicized systems of settlement, not disputes. The Third Premise is that in international relations, national states can transform conflicts into disputes. In this article, conflicts are defined as those issues that lack a legitimate, reliable, transparent, non-arbitrary forum for the peaceful settlement of differences. Disputes, conversely, are pre-described as having recognized forums for their expression and resolution that meet the above criteria. In short, conflicts lack a viable "container" for the routine management of differences(Shonholtz, General Theory on Disputes and Conflicts, 2003).

Under authoritarian regime issues are treated as conflict because they are managed through forms of repression, violence, avoidance or ideology. Moreover, existing settlements mechanisms are always subject to political influence and accordingly politicized, depending on the parties, issues and regime's interests. Authoritarian regimes are sensitive to all issues that relate to their power and control, for these reasons they intervene, and thereby politicize settlement processes, recognizing that expression of issues and methods resolution are inherently political and have regime consequences. In democratic society, the goal is to create through democratic processes, policies, structures, and mechanisms, skilled personnel and enforcement procedures for managing those issues that without such regimes would undermine the constitutional obligation to maintain peace and tranquility.

New and evolving democracies face a more severe challenge, as the transition from authoritarian to democratic rule brings into the open the historical and political conditions that prevailed prior to the transition. In the transformation process, citizens and government officials are likely to experience all the tensions and issues suppressed during the authoritarian regime, as well as all the new issues created during the transformation to democracy. The case in Somali is most relevant, as citizens and government institutions are yet to recover from negative implication of conflicts and divisions within the society and issues such as ownership rights, demographic representation of the population that was effected most during the civil wars with displacement and land grapping being very common, the impacts from the conflict on the agricultural production are so huge, and both citizens and government are hardly tacking with tensions and suppressed issues by previous regime and following anarchy periods.

Conservation model for Agricultural Development

The rising world population is increasing the pressure on agriculture to produce more food. This is more so for the African continent, where it is not just about food supply, but also a critical factor in economic development, poverty alleviation and improving living standards especially in rural areas. On the other side agricultural production is one of the factors contributing to the degradation of natural resources in Africa. Qualitative assessments of available data suggest that about 20 % of Africa's agriculture lands are severely degraded as a result of direct agriculture activity (McNeely et al. 2001). Environmental problems are considered an inevitable trade off of productive agriculture. On the contrary, Conservation Agriculture proven agricultural production options, which combine production with sustainability.

The conservation model developed at the time of English agricultural revolution of 18th C, supported by English economist such as Malthus, David Recardo

and John Stuart Mill. Conservation model of agricultural development evolved from the advances in crop and livestock husbandry associated with the English agricultural revolution and the concepts of soil exhaustion suggested by the early German soil scientists. It was reinforced by the concept in the English classical school of economics of diminishing returns to labor and capital applied to land and labor. The conservation model emphasized the evolution of a sequence of increasingly complex land- and labor-intensive cropping systems, the production and use of organic manures, and labor-intensive capital formation in the form of physical facilities to more effectively utilize land and water resources. Somalia a country with rich in agriculture, poor natural resource management due to weak public services, deteriorated infrastructure, and relative environmental problem constitute major problem to cropping pattern, the application of conservative model help land and labor intensive cropping system, the use of organic manures, natural resource conservation.

The high-pay off input model for agricultural development

The inadequacy of policies based on the conservation, urban-industrial impact, and diffusion models led, in the 1960s, to a new perspective that the key to transforming a traditional agricultural sector into a productive source of economic growth is investment designed to make modern high payoff inputs available to farmers in poor countries. Peasants, in traditional agricultural systems, were viewed as rational, efficient resource allocators. They remained poor because, in most poor countries, there were only limited technical and economic opportunities to which they could respond. The new, high payoff inputs, as identified by Schultz can be classified into three categories: (a) the capacity of public and private sector research institutions to produce new technical knowledge; (b) the capacity of the industrial sector to develop, produce, and market new technical inputs; and (c) the capacity of farmers to acquire new knowledge and use new inputs effectively. The enthusiasm with which the high payoff input model has been accepted and translated into an economic doctrine has been due in substantial part to the Success of efforts to develop new high-productivity grain varieties suitable for the tropics.

Conceptual framework

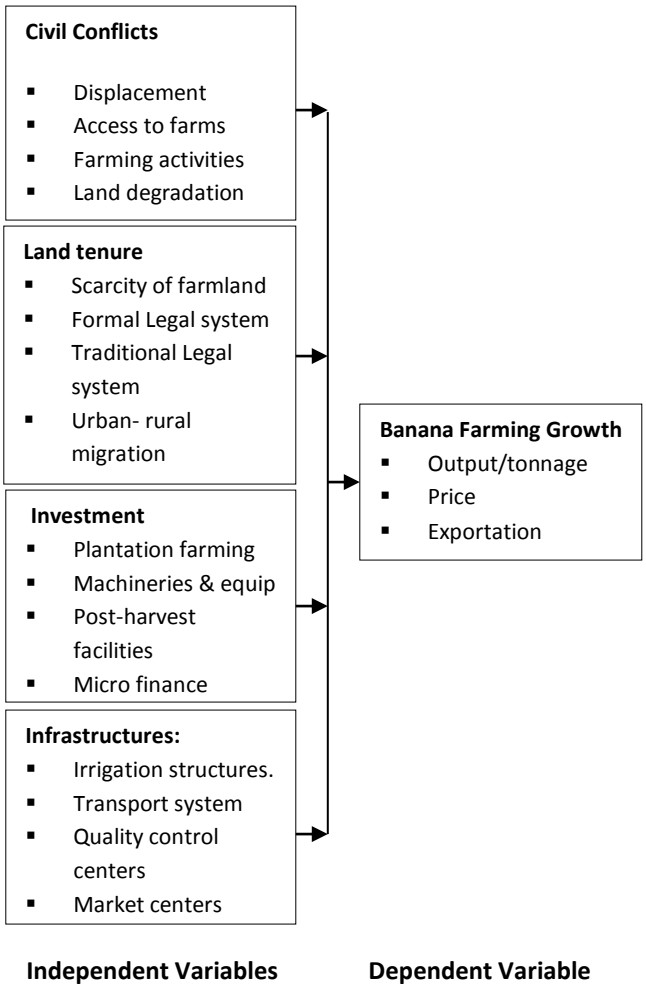

Figure 1: Conceptual Framework

Effects of civil war on banana production

War always has a destroying impact on the environment and, more specifically, the agriculture. Many conflicts today takes place in rural areas, where farmers are victims. Here, local seed systems may

come under stress or even collapse, either directly or indirectly. This leads to big problems; it jeopardizes immediate food needs and threatens the very sustainability of local agriculture. That means serious consequences for the variety of genetic resources which is critical for the long-term survival. For the formal varieties, the supply of seed may dry up in times of war. Transport routes could be disrupted, or pesticides and fertilizers needed to grow may be unavailable. In Somalia, agriculture is the backbone of the country. 80 percent of the population depends on agriculture, and it contributed to more than 80 percent of the total export of the country before civil war mainly consisting on livestock, bananas, vegetables and other fruits. During the civil war, agriculture declined more than 80 percent due to lack of security, lack of agricultural inputs and lack of relevant agricultural technology coupled with pests and diseases (Sofie Utne, 2008).

Effects of land tenure on banana farming growth

On the Horn of Africa the disenfranchisement of local populations from traditional land and water rights has been a major factor contributing to conflict and instability (Hutchinson RA, 1991). The implementation of land registration programs in many parts of Africa, and the success or not of these in increasing tenure security for occupants and transient users, can have unexpected repercussions in pastoralist access to resources during the dry season and drought. The 1975 Land Reform Act in Somalia was formulated to give advantage to state enterprises and mechanized agricultural schemes; with limited rights accorded to small farmers, and no rights given to pastoralists (Hutchinson RA, 1991) The national land registration program in place just prior to the 1991-1993 famine was unrelated to the traditional tenure regime which was well understood by small farmers and pastoralists in the area, and which continued to operate in many areas into the 1980s, despite the existence of the 1975 law.

The national land registration procedure was cumbersome, required a great deal of time and money for small farmers, was centralized in Mogadishu, and was most easily used, abused and manipulated by well-connected officials and their associates in the capital. This, together with the initiation in 1986 of an irrigation rehabilitation project at Shalambood, allowed 'outsiders' to gain title to large tracts of small holder land within the study area. Fear of outsiders laying claim to their land was the most important tenure security concern expressed by the small farmer. While the displacement of small farmers by state-connected elites raises important questions about power and equity, their discussion is beyond the scope of this chapter, which has focused on multiple resource use between agriculturalists and pastoralists.

Effects of investment on banana farming growth

The banana economy was in dire straits in the early 1980s, as were the rest of the country's productive sectors. The diplomatic rift between the Somali government and the Soviets in the late 1970s, the realignment of the country's foreign relations toward the West, and, finally, the adoption of structural adjustment as a development strategy changed the fortunes of the plantation economy. The confluence of these conditions spelled the inauguration of a neo-liberal economic policy, prompting Italian interests to initiate new negotiations with the government regarding private investment in the banana sector (Samatar, Ahmed I...(ed,). 1994).

These discussions were successful, and an agreement was signed that established Somalfruit in 1983. Somalfruit, a joint venture, was dominated by the Italian group, De Nadai through Somalfruit, made credit and agricultural inputs available to producers and invested in irrigation and marketing. Consequently, slow but steady progress was made in revitalizing the industry. Except during 1984 and 1985, when the river valleys were flooded and the crops damaged, banana exports steadily increased

until the disintegration of the country in 1991, Somalfruit which was responsible for mending the industry, deserves the credit for expanding production and restoring export quality (Samatar, Ahmed I...(ed,). 1994).

Effects of infrastructure on banana production

Gravity or pump irrigated agriculture – this is mostly found along the entire lengths of both the Juba and Shabelle rivers. Gravity irrigation operates by sourcing water from the river directly to the farm or through a series of canal systems i.e primary, secondary or teritary canals. This is mainly applicable along the Shabelleriver, particularly in the lower end of the river catchment. Gravity irrigation along the Shabelle is supported by considerable infrastructures including barrages, canals, river embankments and bridges. Successful gravity irrigation started with the construction of the Janale Barrage in Lower Shabellesometime in mid-1920.

The construction of the Janale barrage ushered in a new crop production system based on commercial farming for export. Irrigation development expanded gradually from mid-1970s to 1990. This period witnessed the construction of a number of additional barrages and associated canal systems along the ShabelleRiver in both Middle and Lower Shabelle regions. At the time of the civil war in 1991 there were a total of 9 functioning barrages along the Shabelle and one along the Juba. Most of the irrigation infrastructure was established to serve commercial farm production especially for the production of export banana, sugarcane and rice production (Cardno.Agrosystem.Africa.Ltd, 2010).

Review of dependent variable

According to the Central Bank of Somalia, imports of goods total about $460 million per year, and have recovered and even surpassed aggregate imports prior to the start of the civil war in 1991. Exports, which total about $270 million annually, have also surpassed pre-war aggregate export levels but still lead to a trade account deficit of about $190 million US dollars per year. However, this trade deficit is far exceeded by remittances sent by Somalis in the Diaspora, which have helped sustain the import level (Centeral Bank of Somalia, 2012).

Crop production is next in importance to livestock and its contribution to household economics is growing in importance. Rainfall is typically low and highly variable throughout most of the country. The annual rainfall ranges from 63 mm on the northern coastal areas to just under 600 mm at higher elevations in the south and in the northwest. The major cereal crops cultivated in Somalia are sorghum and maize. Both crops are grown under rainfed and under irrigated conditions. Commercial crops such sugar cane, bananas, grapefruits and rice were also successfully cultivated in the south along the two rivers. Sadly most of the commercial farming operations have been ceased to function (Cardno.Agrosystem.Africa.Ltd, 2010).

Somalia was previously a central hub for banana exports in Africa. With the industry employing over 120 thousand workers and exports worth 96 Million US Dollars, Somali banana production reached its peak between 1987-1990 exporting mainly to Italy and Middle Eastern Countries. Despite a once flourishing banana industry, the onset of civil war in the 90's, combined with severe El-Nino floods brought the banana export industry to a standstill in 1997. Despite these challenges, various attempts were made by the help of International communities and Donor agencies to help revive banana sector production, however, with little success the banana sector has yet to reach its full potential ensuring food security, employment creation, and export earnings (SATG, 2016).

METHODOLOGY

This study was conducted through the descriptive survey design. Descriptive research is used to describe characteristics of a population or phenomenon being studied. The research design generally entailed quantitative and qualitative descriptions to effects on banana production on economic growth in Somalia. The research design enabled for the researcher to obtain extensive data, which facilitated to explain the obstacles to revive the renowned banana crop production in the country. The survey design had been preferred because surveys became relatively less cost and also useful in describing the characteristics of a large population and making the results statistically significant even when analyzing the variables. Survey method was used since the researcher was planning to collect a lot of data within a limited period of time as was the case with this study.

FINDINGS

Effects of Civil War on Banana Production

Table 1 showed that 55% of the respondents agreed that effects of civil war include, poor access to farms due to insecurity, 17% of the respondents agreed that lack of proper farming resources due to insecurity effected banana production system, 23% of respondents agreed that insecurity disrupted farm villages and caused farm land eviction by warring factions in the banana farming area and 5% agreed that effect of civil war had inflicted devastation to agricultural infrastructure this effected significantly the banana production.

Table 1: Effect of civil war effects on banana production

Description	Frequency	Percentage
Poor access to farm due to insecurity	38	55%
Lack of proper farming resources	12	17%
Eviction/land grabbing	16	23%
Devastation to agricultural infrastructure	4	5%
Total	70	100%

On the extent to which civil war effected the banana farming growth, the majority of the respondents of 46% agreed that civil war effected to great extent the banana farming growth, 28% agreed that that civil war effected to moderate extent the banana farming growth, 24% agreed that the civil war effected to low extent the banana farming growth and 2% agreed that civil war effected very low extent the banana farming growth.

On the extent to which civil war limit access to farms and inputs, the majority of respondents 43% highly agreed that civil war substantially limited access to banana farms and inputs, 27% of the respondents agreed that that civil war effected the banana farming growth ,16% showed neutrality whether the civil war effected banana farming and inputs or not, 9% of the respondents highly disagreed that the civil war effected the banana farming and inputs, and 5% of the respondents disagreed that civil war effected the banana farming and inputs.

Table 2: Level of agreement to the statement relating to effect of civil war on banana farming growth

Civil war	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. Deviation
Civil war mitigation improve banana growth	70	0	70	3	27	14	8.888
Peace attract farmers into banana production	70	0	70	5	23	14	9.925
Peace increase access to farm inputs	70	0	70	8	22	14	5.788
Peace increases banana farming activity	70	0	70	3	20	14	8.337
Addressing causes of conflict result peace	70	0	70	2	23	14	10.559

The effect of land tenure on banana farming growth

Table 3 showed that the effect of land tenure on the reduction of crop production, 75% agreed and said yes that land tenure problems significantly contributed the reduction of banana farming activities, 25% of the respondents agreed and said that no, as to whether land tenure to reduction of banana production.

Table 3: Land tenure and its contribution to the reduction of banana crop production

Description	Frequency	Percentage
Yes	53	75%
No	17	25%
Total	70	100%

The study further hunted to find out whether the scarce resource was the root cause of land tenure problems effecting banana crop production, According to the findings 46% of the respondents highly agreed that scarce resource was the root cause of the land tenure problems, 29% of the respondents agreed that scarce resource was the root cause of the land tenure problems, 11% of the respondents showed neutrality whether scarce resource was the root cause of land tenure problems or not, 8% highly disagree that scarce resource was the root cause of land tenure problem and 6% disagree that scarce resource was the root cause of land tenure problems.

The study sought to find out existing legal mechanisms in the study target area so as determine how problems relating to land ownership disputes were addressed. The finding showed that 57% of the disputes were handled through the use of customary laws, 30% of the respondents said that cases over farm land disputes were addressed through courts, 10% of the respondents affirmed that disputes were not solved since there were no effective law enforcing bodies to address the matters, and 3% others said the disputes over land ownership were solved through payment of money to land grabbers to get the farms back.

The study wanted to find out the whether the legacy of previous legal system and policies adopted for the land tenure still affected the land tenure system and contributed to its problems and dynamics. The findings showed that 40% highly agreed that legacy from previous legal and land distribution policies effected the existing land tenure mechanisms, 21%, of the respondents agreed that legacy from previous

legal and land distribution systems effected the exiting land tenure mechanisms, 11% of the respondents showed neutrality whether previous legal and land distributions effected the existing land tenure mechanisms or not, 9% of the respondents highly disagreed that legacy from previous legal and land distribution system effected the existing land tenure mechanisms and eventually 19% of the respondents disagreed whether previous land tenure policies hasd effect on existing land tenure mechanisms.

Table 4: Level of agreement to the statement relating to effect of land tenure on banana farming growth

Land tenure	Obser vations	Obs. with missing data	Obs. without missing data	Minim um	Maximum	Mean	Std. Deviation
Land polices improve banana Production	70	0	70	3	27	14	6.819
Customary laws help reduce banana disputes	70	0	70	2	33	14	11.983
Urban rural migration result land disputes	70	0	70	3	27	14	9.000
Land disputes alter cropping pattern	70	0	70	3	23	14	8.336
Land disputes dispirit the farmers grow banana	70	0	70	2	30	14	11.247

Effects of infrastructure on banana production

The study further sought to answer whether the banana production system at the time lacked proper infrastructure that enabled banana crop production. The findings from table 5 showed that 61% of the respondents highly agreed that banana farming lacked infrastructure to sustain sector at productivity levels, 23% of the respondents agreed that the sector lacked infrastructure to sustain at productivity levels, 7% of the respondents showed neutrality whether the sector lacked the infrastructure to sustain at productivity level or not and 5% of the respondents highly disagreed whether the industry lacked the necessary farming infrastructure to sustain sector at productivity levels and 4% of the respondents disagreed whether the banana farming lacked infrastructure to sustain the sector at productivity levels.

Table 5: Banana production lack infrastructure to enable its farming growths

Description	Frequency	Percentage
High agree	42	61%
Agree	16	23%
Neutral	5	7%
High disagree	4	5%
Disagree	3	4%
Total	70	1000%

The study asked the respondents about the importance of basic infrastructure such as irrigation, roads, and markets in relation to the increase in banana crop production, the findings showed that 59% of the respondents highly agreed that improving access to infrastructure increased banana production,

21% of the respondents agreed that improving access to infrastructure increase banana production, 8% of the respondents showed neutrality whether improving infrastructure increase banana production or not, 3% of the respondents highly disagreed that improving infrastructure increased banana production and 9% of the respondents disagreed that improving access to infrastructure increase banana crop production.

The study further went to answer whether improving the agricultural infrastructure would improve the increase of the banana production for exportation level. The findings showed that 57% of the respondents said yes to the importance of improving basic agricultural infrastructure in order to produce sufficient level of outputs to export 19% of the respondents said no and whether improving access to infrastructure increase banana production for exportation level and 24 of the respondents said no sure whether improving access to basic infrastructure improves banana production for exportation level.

Table 6: Level of agreement to the statement relating to effect of infrastructure on banana farming growth

Infrastructure	Obser vations	Obs. with missing data	Obs. without missing data	Minim um	Maximum	Mean	Std. Deviation
Irrigation enable farmers grow banana efficiently	70	0	70	6	25	14	8.276
Road improve marketing of banana harvest	70	0	70	3	22	14	67.000
Quality controls on banana outputs improve its trading in local/overseas markets s	70	0	70	7	25	14	7.348
Accessibility to market help banana producers sell the outputs at reasonable prices	70	0	70	5	28	14	10.198
Improving other agri. Infrastructure. Such machineries boast banana outputs	70	0	70	1	29	14	10.271

Effect of investment on banana farming growth

The study sought to answer on whether there was relationship between the investment to the industry and boost to banana farming growth, the study found out that investment from local and foreign levels were key to increase in productivity level and relevant growth of banana farming. The finding showed that 49% of the respondents highly agreed that banana production sector lacked the necessary investment to boost its productivity level, 27% of the respondents agreed that the sector lacks the necessary investment to boost its productivity levels, 3% of the respondents become neutral whether the sector lacked necessary investment to boost its productivity level or not, 7% of the respondents highly disagreed that the banana production sector lacked necessary investment to boost its productivity level, and 14% of the respondents disagreed that the sector lacked necessary investment to boost its productivity level.

Table 7: Banana production lacks investment to boost to banana its farming growth

Description	Frequency	Percentage
High agree	34	49%

Agree	19	27%
Neutral	2	3%
High disagree	5	7%
Disagree	10	14%
Total	70	100%

The study sought answers whether improving flow of investment to the banana production industry would help farmers reintroduce plantation farming system that means investment created more plantation farms to grow banana crop. The findings showed that the majority of the respondent 51% highly agreed that it was investment that created plantation farming to enable for farmers grow more banana crop productions, 26% of the respondents agreed that investment would boost plantation farms to produce more banana crop productions, 3% of the respondents showed neutrality while answering this question by saying that they saw investment as something that was not so crucial to the creation of banana plantation farming, but rather accepted that was a part of issues required in general for improving the industry, 9% of the respondents highly disagreed that investment would help farmers grow banana productions in plantation farms and 11% of the respondents disagreed that investment would create more plantations farmers to produce more banana crop productions.

The study further went to seek answers as to whether increasing investment to the banana industry contributed to increase in banana crop production for exportation to overseas markets. The findings showed that the majority of the respondent 48% highly agreed that it was investment that could increase exportation of banana produce to overseas markets, 19% of the respondents agreed that investment in banana farming increased the banana production for exportation to overseas 6% of the respondents showed neutrality on the issue that relationship between investment and exportation of banana produce to overseas, 10 % of the respondents highly disagreed that investment increased banana production for exportation to overseas and 17% of the respondents disagreed that investment increased banana production for exportation to overseas.

The study found out that answers toward the importance of farm machinery in banana production in terms of efficiency and outputs, the findings showed that majority of the respondents 23% highly agreed that improving access to farm machinery enable efficiency and outputs of banana crop, 36% the respondents agreed that farm machinery improves efficiency and outputs of banana, 7% of the respondents showed neutrality whether farm machinery improved the banana farming efficiency and outputs or not, 15% of the respondents highly disagreed whether farm machinery improves the banana farming efficiencies and output of banana crop, 19% of the respondents disagreed that whether access to farm machinery improves farming efficiency and outputs of banana crop.

Table 8: Level of agreement to the statement relating to effect of investment on banana farming growth

Investment	Obser vations	Obs. with missing data	Obs. without missing data	Minim um	Maximum	Mean	Std. Deviation

Investment help farmers produce high outputs	70	0	70	0	31	14	11.832
Investment help farmers access farm equipment to grow banana	70	0	70	5	24	14	7.211
Investing attract more farmers grow banana	70	0	70	1	28	14	10.00
Microfinance improve farmers access to financial resources to grow banana	70	0	70	4	24	14	7.211
Investing in human resource increase banana productions	70	0	70	7	35	14	7.348

CONCLUSIONS AND RECOMMENDATIONS

The study was set out to assess the factors that determine the banana farming growth. The study had also sought to know whether mitigation of civil disturbances, promotion and adaption of proper land tenure system, improved agricultural infrastructure and increasing in investment can result an increase in banana farming growth. The general theoretical literature on this subject and specifically in the context of Somalia had in fact been inconclusive on several vital questions within the banana and its relation to growth and what can be done to address the challenges facing the possible revival of this vital economic sector. In the study area, conflicts usually occur as they became persistent, the outcomes from destabilization by these conflicts are dispiriting the farmers to access farmland, inputs and other resources need which resulted decline to farmers involvement in the banana production, the conflicts also contributed to devastation of agricultural development in general, the study looked at to determine whether improving and peace and stability can result attraction of more farmers to grow the crop to increase production and findings were very encouraging.

Correlation between the promotion of peace to improve farmers access to inputs and increase in banana farming has been so significant with Pearson correlation of r= 0.777 and level of confidence being a = 0.12 (two tailed). Moreover, the relations between the mitigation of conflicts to improve banana farming growth and promotion of peace to attract more farmers into growing banana crop has also been very significant with Pearson correlation of r = 0.86 and the level of confident being 0.64 (two tailed). In Summary there have been correlation between promotion of peace and stability and increase in banana productions since the peace attracts more farmers grow the crop for commercial purpose, it also improve farmers access to inputs, markets etc. Moreover, the correlation between the land policies improve banana crop production and urban rural migration showed so significant with Pearson correlation of r= .874 and a= 0.053, thus, correlation between these two variables remain so significant, in addition, the variables such as land disputes alter cropping patter and land disputes dispirit farmers grow banana crop is also very significant with Pearson correlation of r = 0.678, and a = 0.209.

Moreover, the relationship between land policies to improve banana production and customary law helps reduce conflict over land ownership issues showed less significant with a = 0.001. The data analysis on land issues show that poor land policies and land disputes, changes on cropping pattern contributed to decline in banana productions, the relationship between land tenure problems and decline in banana production has likewise been very significant.

For agricultural infrastructure, the correlation between irrigation enabling farmers grow banana crop efficiently and other infrastructure including roads, markets etc to boost banana outputs showed significant with Pearsons correlation of r= .950 and

confidence level a = 0.01, in addition , the correlation between roads improve marketing of banana harvest and accessibility to markets help banana producers sell the outputs at reasonable price showed significance with Pearson correlation of r= .870 and a= 0.05. Information from data analysis likewise, show that there is significant relationship between improving infrastructure and increase in banana farming growth, infrastructure such as roads, canals, farm machineries were identified during the study as important factors to realize the growth of banana crop accordingly.

For investment, the correlation between the investment to enable banana farmers produce high quality outputs and micro finance to enable farmers access to financial resource show significant with Pearson correlation of r = .943 and a= 0.16. However, the correlation between investment help farmers produces high quality outputs and investment in farmers skills result improved farming practice to earn high yield in banana showed less significant with confidence level a= 0.00. Information from data analysis show that investment is crucial to improve banana farming growth, investment help farmers increase crop production, attracts more farmers to grow the banana crop, increase access to micro finance to assist farmers access financial resources so that they can expand their farming activities in summary, investment is significant contributor to the increase of banana farming growth.

Recommendation

The study recommended that promotion of peace and stability in the country to revive renowned export quality banana production. Government should formulate effective land tenure policy to improve the rights of farmers and reduce conflict over land disputes. Government should create enabling environment, where, legal frameworks and regulation favor direct foreign investment to banana production and exportation sectors. Massive infrastructure rehabilitation on canals, roads, market structures, quality controls centers are needed to help banana farmers to maximize banana production. Farmers growing banana should have access to government subsidies, and micro finance assistances to increase production. Recommended States/local administration to come up strategies convincing Somali business people to invest in banana farming.

Areas of Further Research

The study further revealed that, there is information gap for other following potential factors that have positive effects to the growth of banana production: Effect of modern banana farming techniques and technology on banana farming growth and the role of public services to promote the banana farming growth.

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