

**CRITICAL ANALYSIS OF AGRICULTURE SECTOR IN CENTRAL REGION OF
MOZAMBIQUE AND ITS CONTRIBUTION TO THE ECONOMY**

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ABSTRACT

This article reports on a study about the agricultural sector and its contribution to the scale of the economy in the Central Region of Mozambique. There is very low agricultural production and this adversely affects the population through starvation and severe poverty. The study sought to fill the knowledge gap caused by the lack of empirical research in this area. More specifically, this study examined the reasons for the low contribution of agriculture to the national economy. The major problem faced in Mozambique and in particular the central region is hunger and poverty. The study used qualitative research paradigm. Data were generated through interviews, field observation, document analysis, questionnaires and focus group discussions. Data were analysed through content analyses. The findings show that factors that cause poor crop production in this part of the country is the lack of technology, poor quality of seed used in this process, disorganized and low financial and technical support to producers. The study recommends designing and implementing training approaches for farmers to help them develop valid and coherent personal practical theories, which correspond with the actual production. The study also recommends that government design and implements policies for funding agriculture practices in this region that has good climate and soils for agriculture. It is also recommends Mozambique government adapt models of agricultural production from other countries, such as China, India and Brazil for implementation in the central region of Mozambique.

KEYWORDS: Agriculture, Technology, Poverty, Hunger, Food Security

Background of the Study

There is an ongoing debate about food production in Mozambique in general and in the central region in particular. The debate centres on the best way to increase agricultural production, which in turn influences the development of the region. As a result there have been several approaches and methodologies for improving the production. However, methodological proposals for large-scale production by small farmers are often implicit rather than explicit. Moreover, the absence of clear guidelines on how to achieve high agricultural

production, particularly in situations where the environment in which farmers work and their problems are ill-defined and go more in depth. This then urges for critical thinking or analysis of the agricultural sector.

In this case, the analysis focuses on the factors that contribute to the production of quantities of agricultural products in central region of Mozambique. Santos (2006, p. 2) says that production is a process that involves the coordination of work, business and finance in various ways such as raw materials, products already processed, all equipment types, plants, technology, workforce, knowledge management, with the objective or purpose of producing agri-business that are required for export. (Samuelson & Nordhaus, 2010:110). States that the factors of production are made up by the land, labour and capital. All these factors culminate in effective agricultural production.

Agricultural production depends on natural reproduction and growth of plants animals. Farmers can control and stimulate these processes in order to produce food and other goods for human consumption. To achieve effective productive agriculture activity farmers need land, productive resources, such as technical knowledge, seeds, breeding livestock, labour, tools, and machinery. Having such resources will allow the maximization of agricultural production, to ensure economic growth, food security, reducing hunger and the welfare of the population. Santos (2006, pp. 2-3) says that the main task of the farmer is the production of food and other products that people need to survive.

Agriculture has always played a key and important role in wealth creation worldwide. Despite all the technological and scientific advancement that allows for abundant food production there still is food deficit in the global and central region of Mozambique (Hirai & Anjos, 2007). . The food security requires constant availability of adequate world supplies of basic to maintain a steady expansion of food consumption and to offset fluctuations in production and prices (Cunha, 1974).

According to FAO (2012 quoting Araújo, 2007, p.62) "food security is a situation that exists when people at any time, physical, social and economic access to sufficient, safe and nutritious food to satisfy their nutritional needs and food preferences for an active and healthy "life. further defines "food security as a set of standards for production, transportation and storage of food targeting certain standardized physic-chemical, microbiological and sensory characteristics for which foods are adapted for consumption".

Problem

Mozambique has vast tracks of land for the practice of agricultural production. Mozambique has about 36 million hectares of which over 10 million is arable land with good soils and climate (Hanlon, 2011). The Central Region of Mozambique has 5 million hectares being used for the practice of agriculture (Siteo, 2005). From this, only 3.3 million hectares could be irrigated, but only 50,000 hectares is being irrigated, this irrigated land is equivalent to 0.13% of arable land (CEMO, 2011). With these data, we conclude that there is no sufficient means and resources available to achieve effective performance for agricultural production. In Mozambique, it is considered that the basic economic activity is predominantly subsistence agriculture. It was observed that 69% of cereal production originates in the central region of Mozambique (CEMO, 2011). Despite the above statistics, the central region of Mozambique remains the poorest region in the country with food shortages persistently, due to low rates of production of food. Mozambique, despite abundant agricultural land ideal for agricultural production, the country continues increasing the index form of hunger and poverty especially in central region of Mozambique. Thus the big question that remains unanswered is why the agricultural sector in Mozambique fails to contribute to the economy, as it is considered the foundation of economic development. The country is endowed with abundant and fertile soils to boost agricultural production especially in the central region of Mozambique land. Assuming that in Mozambique, as well as in any other SADC country, agriculture is the backbone of the country because the more surplus produce to the economy will help to increase exports and reduce imports and this has a direct implication on the economy because it reduces inflation. This is one of the clear reasons of great importance for the agriculture sector in the economy and the reason of this study.

Purpose of the study

The aim of this study was to critically analyse the agriculture sector to identify reasons why this sector continues to slowly contribute to economic growth and the food security especially in the central region of Mozambique.

Research Questions

The following research questions guided the researcher to explore and investigate the phenomenon under study:

1. What kind of farming is predominant and contributes in trade and employment market in the central region of Mozambique.
2. Why does the agriculture sector not contribute to economic growth in the Central region of Mozambique?
3. What types of agricultural products can influence the growth of the economy and trade at the central region of Mozambique?

Research Methodology

A paradigm is essentially a worldview, a whole framework of beliefs, values and methods within which research takes place. According to Creswell (1994, p. 15) “a qualitative study is defined as an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting.” Qualitative research was used in this study because it comprises a set of different interpretive techniques aiming at describing and unfolding components of a complex system of meanings. It aims at translating and expressing the sense of the phenomena of the social world, thus reducing the distance between the indicator and the indicated, or between theory and data or between context and action Denzin & Lincoln (1994 cites Maanen, 1979).

According to (Hammersley, 1992) qualitative researchers share a set of preferences which are:
- A preference for naturally occurring data, that is, observation rather than experiment, unstructured versus structured interviews.

-“A preference for meanings rather than behaviour, that is, attempting to document the world from the point of view of the people studied, (Hammersley, 1992, p. 165). Therefore qualitative method was used for this research since the research was based on the way people experience social phenomena of cereal production in the real world in which they live, with particular focus on how agriculture contribute to economic growth . Thus, qualitative research enabled the researcher to come up with a “deeper” understanding of social phenomena than would be obtained from quantitative data. Though qualitative research downplays or avoids the use of quantitative instruments, numbers and other phenomenon that arise in research need to be measured. Thus quantitative instruments had to be used in this research; for example, the number of farmers who produce wheat, or rice or maize and quantities and numerical values of significant data, that needed to be recorded quantitatively. The method used in this study qualitatively resembles the interpretation of phenomena that are used every day, which have the same kind of data that the researcher employed in this

research. Godoy (1995, p. 58) explains some key characteristics of a qualitative study. He asserts that qualitative research "considers the environment as a direct source of data, and the researcher, as a key instrument having a descriptive character; the process is the main focus of approach and not the result or a product; where data analysis is performed intuitively and inductively by the researcher". Thus, according to Godoy (1995, p.58) "qualitative research does not attempt to enumerate and/or measure the events studied, nor employ instrumental statistical data analysis; "it involves obtaining descriptive data about people, places and interactive processes by direct contact with the researcher who studies the situation, trying to understand the phenomena from the perspective of the subjects, that is, the situation of the participants in the study. The study was based on a case study.

According to Yin (1994, p. 2) "the case study proposes to investigate a contemporary phenomenon, where the boundaries between the phenomenon and its context are not clearly perceived. Its utility is to assist in the development or improvement of theories. Empirical evidence should generate feedback to the unknown and enable analytical generalization where possible." On another note Robson (1993, p. 40) defines case a study as the development of detailed, intensive knowledge about a single "case", or a small number of related "cases." The case study approach also has considerable ability to generate answers to the questions, 'Why'? 'What?' and 'How?'

In this research therefore, individual farmers, and government officials were interviewed through the use of various instruments to draw out deep meanings of the current and future cereal production prospects in central region of Mozambique.

Low cereal production poses a social problem of hunger which culminates into poverty that plagues the central region of Mozambique. Hence some ways to increase cereal production in the central region would undoubtedly benefit the people of this area. This research's goal was to make a thorough investigation on the perception of the farmers or their associations for the reasons why there is low cereal production while biophysical conditions are suitable for more quantities of cereals to be produced in central region of Mozambique. The next section describes the process followed to generate the data for this study.

Population

The population for this study included the peasants or small, medium and large agricultural farmers of central region of Mozambique, officials from the Ministry of Agriculture, cereal traders and elders living in the research areas. In addition, the population included economic

agents, district officers from the government departments, agricultural associations, non-governmental organizations, transporters and the general public who are the consumers of the cereals. These constitute the key stakeholders in the production of cereals. In this region, different cereals such as maize, sorghum, millet and rice are produced and distributed through various categories of grain merchants, while the consumers who benefit from this process are mainly the general public. It is critical to note that there is always food crisis in those regions which are very close to the central region of Mozambique. For this research, data were generated from a heterogeneous population that represents the country's population that is practising agriculture in this region.

Sample and Sampling Procedure

The central region of Mozambique has four major provinces namely, Zambezia, Sofala, Manica and Tete. One district experiencing low cereal production in each province with agricultural potential was purposively selected. Thus, for Zambezia province Namacura district was selected, Gorongosa district was selected in Sofala province, Gondola District for Manica province and from Tete province Angonia district was selected. Cereal producers and consumers were then selected using the simple random sampling method due to the fact that the participants reside in clustered homesteads and to save time, the researcher preferred this sampling method. The sample comprised groups of peasant farmers and agricultural associations to form designated focus groups for discussion. For the focus groups, guided unstructured interviews were carried out. This allowed the researcher to understand the profound reasons for the low production of cereals.

The population was divided into subpopulation (stratum). By stratification, the researcher grouped members of the population into homogeneous subgroups before sampling. The researcher then used a convenience sampling method within each stratum on the participants on the basis of their accessibility and convenience to the researcher. The main assumption for using convenience sampling method is that each stratum is homogeneous (Ross, 2006). The sample size of 32 was used for this research.

Sampling Procedure

Stratified random sampling was used for this research. For group discussion in each district, 6 people of the producer group were selected. Within this group there were producers of sorghum, maize and rice and other cereals. The 7 participants were the principal farmers in

each district who are the presidents of the associations. For each district, the director or the district director of agriculture was interviewed, totalising 8 participants per district. The following table (Table 1) shows the sampling and stratification method used for this research.

Table 1: Sampling per Stratum

Target Participants	Strata	Number
Growers of sorghum	People with at least 1 ha and local leaders	1
Growers of maize	People with at least 1 ha and local leaders	1
Growers of rice	People with at least 1 ha and local leaders	1
Farmers of other cereal (specified)	People with at least 1 ha and local leaders	2
Mixed cereal growers	People with at least 1 ha and local leaders	2
Government Officials	Administrators in each district	1

Source: Author, 2013. Please note that this gave a sample of 8 persons per district and 32 persons total. This was a representative sample since it covered as many people involved in cereal production as possible. Being a qualitative study, this research included interactive interviews in the form of one-on-one interviews, focus group discussions, document analysis and observations.

Findings

These results indicate that the practised agriculture in the central region of Mozambique is of predominance of subsistence agriculture. The data clearly show that the peasants of the districts of Namacurra, Gorongosa, Gondola and Angónia and community leaders are practitioners of consumption or subsistence agriculture. The data also show that there is a major limitation in the production of this subsistence agriculture or consumer due to the use of rudimentary tools such as short-handled hoe and also "depend on rain to produce food to eat".

Regarding the contribution of the agricultural sector, farmers do not find a great support or support to develop agriculture turned to the economy or agriculture that contributes to economic growth due to low use of technologies. It was observed that in Gorongosa district, farmers can produce, e.g. maize in surplus, but not easily find the market to allocate the product, placing mode from the product at relatively low. And sometimes the producers and sellers of corn stay many days waiting for buyers from the South Country. While in Angónia, the producers found it easy to sell their products to the markets of Malawi and there is flow of demand for agricultural products, but no surplus because production is insufficient. The same

scenario happens in Namacurra and Gondola, where the agricultural sector could have some impact on the economy or have contributed a lot in trade, but it was not observed due to lack of investment in this area.

For the District of Namacurra, producers refer that they do not have culture or product of income, since its production has not been very abundant of which the composition of land does not allow the production of culture related to economics, such as soybeans and sesame seeds. For the Gorongosa district, the producers refer what is considered garner, but all produce small amounts with the exception of corn, but the demand for it is weak. As for the Gondola district also reported that the production is diversified for any kind of culture, but has been small amounts intended for consumption. Farmers seek to produce culture for consumption and not for sale or trade. Some producers are aware that there are cash crops such as soy, sesame and beans. But they claim they care about culture for consumption due to hunger and in turn the production has not been high due to lack of financial support, material and techniques from the Government and technologies that make difficult in a major manner the contribution of economy and trade.

Discussion

Within the agriculture sector, respondents were unanimous in stating that there is a predominance of subsistence agriculture destined for consumption. This is because the agricultural sector is mainly composed by the family sector, practicing subsistence agriculture, which depends mainly on rainfall. This family or subsistence agriculture consists mainly of small farms, those who cultivate less than 5 ha, but accounts for about 99% of agricultural units and occupies more than 95% of the cultivated area of the country. (Siteo, 2005)

The agricultural sector does not contribute to economic growth due to disproportion in public spending allocated to agriculture relative to other sectors of the economy. In the period 2004-2006, agriculture received an annual average of about 6% of total government expenditure, which is below the 10% target set by CAADP. In 2007, agriculture received only 3.7% of total expenditure. (Cunguara, 2011). It also negatively influences the economy due to low use of technologies, production for consumption, poor infrastructure. Whereas the Mozambican economy is basically an agricultural economy, but still far enough evidence prevails in the concrete this economy because Mozambicans still spending hunger.

The respondents refer that the cash crop has been first, sesame, beans and soybean. But for other producers in particular the district of Gondola state that depend in particular on the amount of production for each crop. If for example, a lot of corn production, this becomes

marketable product depending on market demand. Specifically for the central northern Mozambique, the cultivation of cotton and sesame presents important and it is considered a cash crop that can influence the growth of the economy. (Sitoe, 2005) For the Tete Province is more frequent production of tobacco, sunflower is more cultivated in the province of Manica.

Limitations

The challenge of the agriculture sector problems consisted of access roads from one district to another. There are regions where there is flooding due to rain and these areas become almost impossible to drive to. The researcher generated data during the period of less rain. Informants were sometimes reluctant feeling uneasy with strangers. This problem of unwillingness by farmers to give the vital information was carefully taken care of as the researcher approached the farmers through their community leaders.

Conclusion

From the above findings the researcher concludes that agricultural production in the central region of Mozambique is the production of subsistence crops, producing only enough to eat. This is primarily caused by the use of rudimentary tools for agricultural production, harvesting and storage as well as the lack of financial or weak financial investment in food production in the central region of Mozambique support. Therefore, the predominant subsistence agriculture is turned to the consumption. The agricultural sector does not contribute to the economy growth due to low production in that sector, since there is not adequate funding, the use of technology for agricultural production in the central region of Mozambique is minimal or nonexistent, especially in land preparation, crop management, harvesting and storage. Lack of methods affects the machining process of cultivation and irrigation. Therefore agricultural production in central Mozambique continues to be weak, negatively contributing to the economy of the central region Mozambique. Similarly it was concluded that the type of product that can influence the growth of the economy and generate employment depends on the amount production and the market to allocate the respective products. However, no culture which by nature is known as cash crop such as sesame, soy, beans and tobacco. Therefore the marketing of these crops also obviously depends on the amount of their production.

Recommendations

The researcher offers recommendations for constructive perspective. Researcher's propositions are based on assumptions that happen for agricultural production must be visibly significant support from the central government of Mozambique. Hence the recommendations are based on changing domestic agricultural practices. The recommendations are therefore arranged in two main areas, namely, domestic producers and government, with recommendations for further study that make up the last, but not least important component.

Recommendations for Families

For the transformation of subsistence agriculture sector to income and earn income considered positive, land preparation, crop management and production volume and storage should be replaced by the introduction of technological innovation. This would ensure high quality seeds, advanced and mechanized land preparation, planting methods, weeding and pest control, fertilization, more productive crop and storage mechanisms.

It is recommended that farmers Namacurra, Angónia, Gondola and Gorongosa seek to use quality seed and certified seed and new every 4 years. Farmers must buy new seeds and avoid second recycling probably seeds of the previous generation. They should break the vicious circle. Farmers in the central region of Mozambique are recommended to try to preserve the ground trying to avoid forest fires that destroy not only the natural flora and fauna but also the soils. Farmers also recommend applying fertilizers that are best for your soil types, as this increases the production as farmers of Pakistan. (Salam 2012). Farmers should harvest their crops diligently to avoid the waste of grain.

Recommendations for Policy makers

In order to motivate farmers and promote increased agricultural production, the government plays a critical role in agriculture. It is recommended that the government sets the policy to promote agriculture in Mozambique through the involvement of necessary and appropriate strategies to promote food production in order to reduce hunger and poverty. It is recommended that the government has a pro-active role in research to establish the quality of the seeds, the mechanisms of cultivation and storage of agricultural products. The Government should set the prices of agricultural products that stimulate the production of food. The Government should create more relevant and conditions for the use of technology

in agriculture, including the use of tractors and plows to facilitate agricultural production as well as encourage the use of irrigation in food production. The Government could develop infrastructure on farms by farmers or other involved organizations; e.g. NGOs and try to find a clear line of financial and technical support to producers.

Reference

1. Centre for studies for Mozambicans [CEMO](2010) The impact of Agrarian Politics in Mozambique, Maputo. Fsg publication
2. Creswell J (1994) Research Design: Qualitative and Quantitative Approaches, Thousand Oaks, (Calif), Sage.
3. Cunguara, B. (2011) Agrarian sector and Mozambique: A situational analysis, Constraints and Opportunities for Agrarian growth, Maputo. Msu publication
4. Cunha, R. (1974) Food Security- A Concept Structure. Rome.FAO publication
5. Denzin, N. and Lincoln, Y. (1993) Handbook of Qualitative Research, SAGE Publications, USA.
6. FAO (2012). The State of Food and Agriculture. Italy. FAO publication
7. Godoy, A. (1955). Introdução á pesquisa qualitativa e suas possibilidades. São Paulo.
8. Hammersley, M (1992) *The Dilemma of Qualitative Method*, London, Routledge. RAE publication
9. Hanlon, J. (2011) Conferência Anual sobre a terra e a pobreza. Washington. Banco Mundial publication.
10. Hirai, W. & Anjos, F. (2007). *Nations and Food Security: Approaches and Limitations of National Politics in Brazil*. Brazil. PUCRS publication.
11. Salam, A. (2012). Review of Input and Output policies for Cereals Production in Pakistan: Environment and Production Technology Division. Pakistan. IFPRI publications
12. Santos, J. (2006) Production theory, New York. Fep publication
13. Siteo, T. (2005). Agricultura famílias em Moçambique. Que módulos e estratégias par o desenvolvimento sustentável. Maputo. Saber publication
14. Robson, C. (1993), Real World Research: A Resource for Social Scientists and Practitioners- Researchers, Oxford. Blackwell Oxford
15. Ross, J.(2006). Practical assessment, research and evaluation. Toronto. Pareonline publication
16. Yin R K (1994) Case Study Research: Design and Methods (Applied Social Research Methods) Paperback– March 18. Amazona publication