

An investigation of co-operatives in crop production as a tool for poverty reduction in zambia a case study of lufwanyama district.

Denny Maluti¹, Martin Kabwe²

^{1,2}The University of Zambia

Abstract

This study investigates the role of Co-operatives in crop production as a tool for poverty reduction in Zambia. Focusing on how Cooperative membership influences income levels and access to resources. The objectives of the study were to; (i) assess the roles played by Co-operatives in poverty reduction and (ii) to determine the relationship between the types of crops grown and their bearing on poverty reduction. Data was collected through survey with questionnaires administered and focussed group discussions from cooperative executive members in the six chiefdoms of Lufwanyama district. The questions were designed to capture information on incomes, access to resources, quality of life, types of crops grown, benefits accrued on cooperative membership and land ownership/assets acquired. The focussed group discussions provided further perceptions on issues in Cooperatives. The data was analysed using statistical numerical analysis using software such as SPSS and Microsoft excel, to identify significant factors influencing poverty. The results showed that Cooperative membership has a significant positive influence on member's access to income and resources. The study highlights that Cooperatives provide a platform for material and financial empowerment to people in Lufwanyama District. The outcome of the study demonstrated that the type of crop also has a positive moderate correlation and an influence on levels of poverty as Soyabeans is a crop that showed high potential on reducing dependency syndrome on government subsidies if promoted and supported. Based on these findings recommendations are made on policy interventions to enhance the support and growth of Cooperatives in Zambia with particular emphasis on high cash crop production of Soyabeans and/or Groundnuts away from traditional Maize. Devising mechanisms of curbing corruption in the administration of subsidy programs and that there be more women and youth involvement for inclusive access to finances, equipment and farming inputs as well as providing tailor made training programs. Poverty was at 82.6 % in Lufwanyama and above the 54 % national average in tandem with other prior studies. Overall, the study indicated valuable insights into the potential for Cooperatives in crop production to contribute to poverty reduction in the region, offering implications for both policy makers and practitioners working towards poverty reduction.

Keywords: Cooperatives, poverty, crop production.

1.0. Statement of the problem

Poverty has been a millennial challenge on a global scale and concern has been raised through the sustainable development goals (SDGs). Hence various countries have consented to these goals and have been making many efforts to either eliminate or reduce poverty. The 2030 agenda is aimed at reducing all forms of poverty tackling the SDG no.1. (United Nations, 2018).

Co-operatives play an important role in poverty reduction because they are a mechanism which ensures growth and prosperity of Communities. Despite the existence of Co-operatives in Zambia, the poverty levels still remained high.

The BTI report (BertelsmannStiftung Index , 2022), indicated that Zambia remained one of the least developed countries in Africa, with 54% of the population living on less than US\$1.90 a day and an average life expectancy of 63.5 years. For instance, Lufwanyama district comprises 601 Co-operatives in Crop production (Ministry of Small and Medium Enterprise Development, 2022) and the government has a number of empowerment programmes targeting Co-operatives as tools for poverty reduction such as Social Cash Transfer(SCT),the Farmer Input Support Programme (FISP),Food Security Pack (FSP),Sustainable Agricultural financing facility (SAFF), Constituency Development Fund (CDF), Girls Education and Women Empowerment and Livelihood (GEWEL), Keeping Girls in School (KGS) and Citizens Economic Empowerment Commission (CEEC). These offered subsidised farming inputs, irrigation equipment, grants and cheap project loans. However, despite these interventions and efforts by the government targeting to empower Co-operatives, these have not yielded the expected results. Instead poverty has been on the rise. The Government and the researcher were unsure of how influential the Cooperative model was on poverty reduction, hence the study undertaken. The research contributed to the body of knowledge by establishing that Co-operatives in crop production are instrumental at poverty alleviation and that programmes targeting them required reconfiguration to generate the desired outcomes.

1.01. Definition of Key Terms

A co-operative “means any enterprise or organisation owned collectively by its members and managed for their joint socio-economic benefit and whose activities are not prohibited by law according to the Co-operatives Societies Act No.20 of 1998, which draws inspiration from the European Parliament (Cemal karakas, 2019).

Poverty is a phenomenon multi-dimensional in nature characterised by deprivation, hunger and lack of access to basic human needs of life. These may include but not limited to lack of access to food, health, education, social programs, and lack of title to land, shelter, skills and many others that deprive freedoms of choice or even voice. The basic definition of poverty is the inability of an individual to possess sufficient resources to satisfy his or her basic needs (COMCEC, 2023).

Crop production is a concept that includes the production of food crops, fodder crops, fiber crops, sugar, oil seeds and other crops (Werkissa Yali and Temesgen Begna, 2022).

2.0. Introduction

The debate as to whether Co-operatives can be used as tools for poverty reduction continues over the decades, although the levels recorded were prevalently high despite the existence of many Co-operatives in Zambia. Africa is the second most unequal continent based on within country assets (Abebe Shimeles

& Tiguene Nabassaga, 2018). Co-operatives created platforms or forums for education and training, for reducing ignorance, through mobilization of funds for health needs and business ventures, death and other social calamities as observed in Ethiopia and many other countries in Africa. Extreme poverty affected the rural population representing the bottom 40 percent of the population. There are huge socio-economic disparities between the poor and the rich in Africa, and this gap has continued to widen over the years (Ismael Fofana, Margaret Chitiga-Mabugu, Ramos Mabugu, 2018).

Both poverty and extreme poverty in Sub Saharan Africa are high and have recently been on the increase (La-Bhus Fah Jirasavetakul and Christoph Lakner, 2020). The levels of poverty in Zambia remained high, around 64%, with an asymmetric distribution between rural and urban areas, with a focus on rural areas (; Ministry of Finance and National Planning, 2021). Other researchers also contend to this and recorded figures as high as 82 percent.

2.10. Brief History and State of Cooperatives Societies in Zambia

The current under performance of Cooperatives Societies has been linked to the inability to quickly alter the 1964 – 1991 periods, when Cooperatives functioned as economic subsidy distribution channels. Thus, among other things suggested, were that the government gives up on imposing projects on Cooperative societies. Cooperative societies also needed to be inventive.” A brief overview of the past, even though government funded numerous Cooperative projects, provided grants and loans to support the expansion of Cooperatives nationwide, particularly since 2000 (Mukwalikuli Mundia, Sitali Wamundila, Daniel Siakalima, Chewe Nkonde, Francis Simui, 2021).

It was still difficult to find successful Cooperatives, particularly in rural areas where improving livelihoods is crucial because of the dependency syndrome that rendered them susceptible. It was discovered that Cooperatives societies engaged in crop production found it difficult to survive the fierce competition brought about by the nation's economic liberalization.

Zambia has more than 94,114 Cooperatives and only 69% are traceable and only 30% of the traceable Cooperatives operated sustainably as at 2022.

Their performance was attributed to inadequate entrepreneurial, business management skills and limited access to financial resources resulting into inability to turn available resource endowments into business opportunities. Most of the Cooperatives registered were motivated by government empowerment initiatives such as FISP, CDF, and youth or women empowerment. (Ministry of Small and Medium Enterprise Development, 2024).

Further research was necessary to demystify the notion that Cooperatives did not increase people's quality of life.

This study made sure to corroborate some of these claims by holding that Cooperatives in crop production contribute towards poverty alleviation. The reliance on Maize and the slow rate of adoption of new technology by these groups in crop production led them to be low producers despite the many efforts government has been making in subsidy programmes such as the FISP (Julius Manda, Adane H Tufa, Alene D Arega, Munyaradzi Mutenje, Peter Setimela, Victor Manyong, 2019).

3.0. Literature review

3.1. Overview

This section presents the various literature explored during the research that helped identify the gaps that existed in the body of knowledge. The various conditions under which the Cooperative societies thrived and what other prior studies similar to this have found as pedestal of this research.

3.11. Re-alignment of Government Departments

The recent re-alignment of the Department of Co-operatives and Entrepreneurship Development into the Ministry of Small and Medium Enterprises Development (MSMED) from the Ministry of Commerce Trade and Industry (MCTI) is seen as part of the wider renaissance of Co-operative business models for the entire private sector and an entrenchment of entrepreneurial mindset. In the past Cooperatives were domiciled in the Ministry of Agriculture. (GRZ, 2021). This further enabled Co-operatives to find their place in the micro small and medium- sized enterprises. The MSMEs (including Co-operatives) employ the majority of the country's workforce. However, for MSMEs to have a meaningful impact on employment, the numerous constraints faced by the firms will have to be addressed. Obstacles such as a lack of affordable financing, irregular supply of energy, poor access to skilled human resources and new technologies, high cost of regulatory compliance, and a lack of economies of scale (UPND, 2021-2026). The formulation of the Ministry of Small and Medium Enterprises Development in 2021 was a game changer. It was hoped that the realignment of the Department of Co-operatives with an expanded mandate of entrepreneurship development may result in most of the postulated gains to be achieved, enabling Co-operatives contribute significantly towards poverty reduction.

3.12. Government Social Policy

Currently the Government of the Republic of Zambia has put in place social economic policies, to enable Co-operatives access finances and farming inputs from programs such as the FISP, Constituency Development Fund (CDF), CEEC, SAFF, GEWEL, KGS, Food Security Pack, Social cash transfer. As to whether Co-operatives in crop production can be used as tools for poverty reduction, this study discovered more insights.

3.13. Nigeria's Case

However, Cooperative societies have over evolved. Practically in all parts of the world especially Nigeria, Co-operatives have suffered several crises that have negatively influenced their role in poverty reduction. These challenges among others included substandard management, inadequate capital, issues of credibility, lack of marketing, overdue loans, illiteracy and improper planning (Ademu Yumusa, Aduku Danlami, Prince Onyemaechi Nweke, 2018).

3.14. Tanzania's Case

Evidence in the study of Co-operatives as a tool for poverty reduction and promoting business in Tanzania found that Co-operatives were unique in nature. The Dairy Co-operatives showed that they provided employment and helped members' access market services for their products at premium prices and improved the standard of living.

For Dairy Cooperative Unions due to enhanced governance, transparency and democratic leadership performed well. Although to the contrary the Coffee Cooperative Unions did not provide the anticipated social benefits and hence did not contribute to poverty alleviation to its members and reasons attributed

to these were poor governance, corruption and externalities such as lack of government recognition also affected them (Sumelius John, Backman, Steran and Bee Faustine K, 2021).

However, this study was conducted in the rural part of Zambia in Lufwanyama district. It used both qualitative and quantitative methods at interpretation of data by adopting sequential analysis, not only on crop yields, but also on type of crops grown and the quality of life. Quality of life means but not limited to access to basic needs such as food, shelter, health and education, water and sanitation, title to land as well as access to information and markets, asset accumulation, savings and investment. According to the World Bank (World Bank, 2018), living below US\$1.90 per day per person is a sign of extreme poverty.

3.15. Other Supporting Evidence

Another related study on Agricultural Cooperative Societies and poverty reduction in Zambia: The Case of Kamangango Farmers' Cooperative Society Limited in Kaoma District. (Munzele Paos, 2018).

The study showed that the cooperative society contributed to poverty reduction amongst members by offering access to cheaper agriculture inputs and marketing services, which in turn, increased the members' disposable incomes and food security.

However, there were challenges such as poor roads, high cost of seeds and fertilizers, lack of credit facilities, faced by Co-operatives in providing goods and services to their members. The study recommended that the government and Non-governmental Organizations should encourage the formation of more Co-operatives for improved service delivery to members.

Another study conducted in Kabwe district on Co-operatives and Livelihood Improvement: Understanding the contribution of enterprising agriculture Co-operatives in rural communities of Kabwe District of Zambia revealed to the contrary and argued that despite the existence of many Co-operatives there was little to show (Mukwalikuli Mundia, Chewa Nkonde, Francis Simui, Mwiya. S. Mufalali, Regina Muduli, 2023).

Such arguments prompted the researcher to determine the extent Co-operatives contributed to the reduction in rural poverty and also to inquire whether the type of crops grown had a bearing on poverty status of cooperative members.

From the above studies in various countries and within, we deduced that Co-operatives played a crucial role in poverty reduction despite some pitfalls in some cases.

Depending on the environment in which the research was conducted there were both internal and external factors that determined as to the extent Co-operatives influenced either an increase or decrease in poverty levels. Both the case studies in Nigeria and Tanzania, viewed Cooperatives in a general way in contrast to the characteristics of this recent study.

These studies were conducted in pro-communist states like Tanzania and also in mixed economies like Zambia, have suggested a nexus existed between cooperative membership, type of crop grown and poverty reduction. Geography also had an influence on the results.

This study focused on multidimensional poverty common in rural areas as well as Co-operatives in crop farming both internal and externalities to some extent affecting them.

4.0. CONCEPTUAL FRAMEWORK

The research was built on the concept that an increase in government subsidy programmes may cause or stimulate increased Cooperative membership participation and inclusivity in crop production which is likely to have a resultant effect of poverty reduction on Cooperative members as illustrated below;

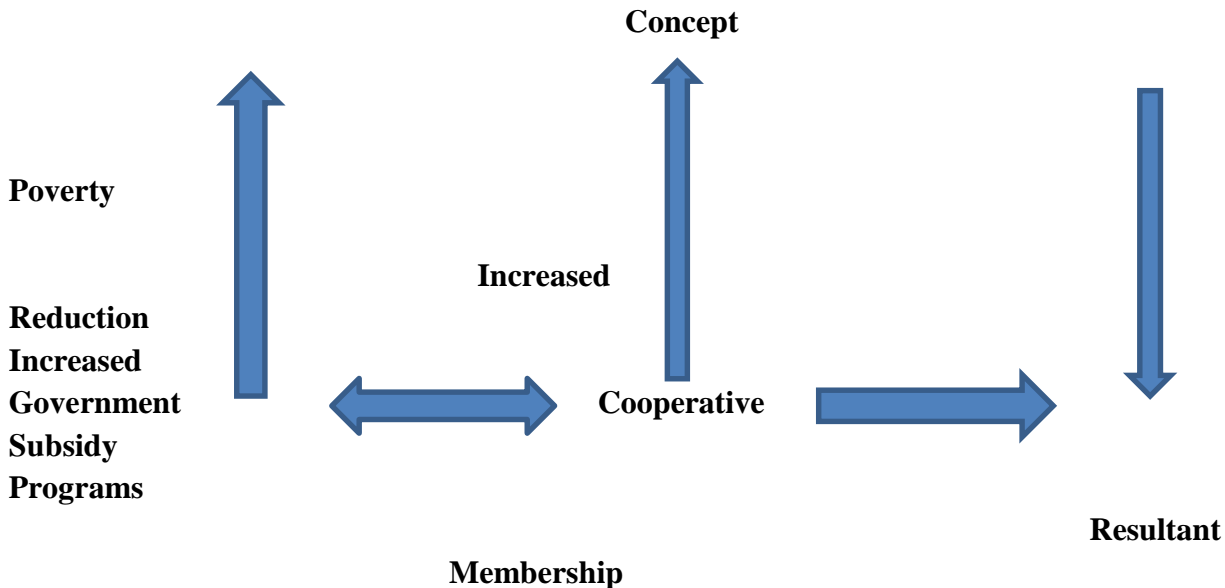


Fig 1: Above: An illustration of the Conceptual framework.

5.0. Research methodology

5.11. Overview

This section focuses on the philosophical assumptions of this study, the research methods, sampling, design, analysis techniques; validity and reliability. It further shows ethical considerations that enabled our research to obtain credible results. The criterion used to conduct this research was a case study approach so that we could get in-depth insights about the topic.

5.12. Philosophical Assumptions

The philosophical underpinning of the research was pragmatism in that it was highly structured and the methods of data collection were both qualitative and quantitative. The survey questionnaires contained structured questions. The analysis followed suit, helping the researcher organise, interpret, contribute to the body of knowledge on results and make possible recommendations to policy makers and practitioners.

5.13. Research Methods

The study basically made use of both primary and secondary data. The primary data was obtained from cooperative representatives through questionnaires who were chairpersons, treasurer or secretaries (leaders) of the Cooperative in crop production. These were interviewed using a structured questionnaire. Focussed group discussions using semi structured questions at Camp Agriculture Committees also informed this research. Secondary data was obtained from the reviewing of prior studies in journals, reports, newsletters and magazines. A case study was preferred as a quantitative method in order to get relationships between empirical evidence and understand the phenomenon of

poverty in the set-up of Lufwanyama district. This was influenced by the availability of resources and time for data collection.

Data was collected through survey questionnaires administered to 236 cooperative executive members from six chiefdoms of Lufwanyama district in Zambia. The survey focused on income levels, access to resources, asset acquisition, and number of meals per day, water and sanitation, title to land and type of crops grown, incomes, benefits from membership and participation in cooperative activities. Sequential analysis was utilized when analyzing data. Focussed group discussions were also conducted in these areas in order to clarify certain perceptions on the subsidy programmes and to obtain meaningful data on poverty. The limitations of the study were finances and distances to research areas rendering it difficult to collect data from four Cooperatives due to communication challenges.

5.14. Research design

This study employed both a survey and focused group discussion approach to arrive at both descriptive and inferential generalizations. A case study approach was adopted for this research. The questionnaire was designed as an instrument for collection of both quantitative and qualitative data. The questionnaire collected biometrics data to assess the extent of participation in Cooperatives by various groups such as women and youth, gender, quality of life, types of crops grown and value added to the membership of Cooperatives, asset ownership to assess the income and expenditure of members and gains if any on subsidies. To analyze data, sequential analysis was used utilizing statistical techniques applying software such as SPSS, Microsoft excel (Correl) to organize data, analyze and to interpret the results. The Sample size was determined using Taro Yamane formula. The variables on poverty were each analyzed and summarized in frequency tables. Then the report was prepared after the research for dissemination of findings and recommendations to the body of knowledge and stakeholders.

5.15. Sample Size and Sampling Techniques

Population frame was the 601 registered Co-operatives in crop production (Ministry of Small and Medium Enterprise Development, 2022) , convenience sampling was used to ensure all six chiefdoms were represented and then cluster sampling technique was applied on the sampling frame. The respondents were any member of the Cooperatives society's executive board who were chairpersons, secretary or treasurer of the Co-operative society. Other key informants were Ministry of Agriculture staff (Agriculture Assistants) in the crop production section based in Lufwanyama District and Ministry of Small and Medium Enterprise Development in the Co-operatives and Enterprise development section for expert opinion on the topic.

However, during the selection of the Co-operatives to be part of the sample we used cluster sampling method with probability proportional to size technique in order for Co-operatives to have equal representation and proper proportions to be generated from each chiefdom existing as clusters. We listed the 601 Co-operatives according to chiefdoms as our sampling frame and in this case according to Yamane, 1967 (Omerhi Ogbenetega John, Joesph Chike Adjadike, Okafor Ozoemena Christian, 2023). The sample size was determined using the formula; with the margin of error to 5 percent and confidence levels at 95 percent. Then;

$$n = \frac{N}{1 + N(e)^2}, \text{ where } n = \text{Sample, } N = \text{Population size and } e = \text{margin of error}$$

Using the equation $n = \frac{601}{1 + 601(0.05)^2} = \frac{236}{1}$, Therefore, the sample actual size was 236, therefore in 6 chiefdoms.

5.16. Sampling with Probability Proportional to Size

All Chiefdoms in Lufwanyama were regarded as clusters and the Co-operatives in crop production were elements in each cluster. In this case, six (6) Chiefdoms, population distribution was as follows; Nkana-101, Mukutuma-93, Lumpuma-95, Shibuchinga -112, Shimukunami-146, Fungulwe-54. According to probability proportional to size the distribution of samples in each chiefdom was as follows as shown in table below;

Table 1 Probability proportional to Size Sampling Chiefdom	No.of Co-operatives	Cumulative total	Sample	Total Sample
1.Nkana	101	101	40	40
2.Mukutuma	93	194	37	77
3.Lumpuma	95	289	38	115
4.Shibuchinga	112	401	44	159
5.Shimukunami	146	547	55	215
6.Fungulwe	54	601	22	236

5.17. Data Analysis

Data were analyzed using descriptive statistics to summarize key patterns and multiple correlation analysis to determine the relationship between cooperative membership, type of crops grown, yields, and income levels. SPSS software and Microsoft excel was used for statistical analysis, and the results were tested for significance to ensure reliable conclusions. The analysis of data was sequential in that both qualitative (Focussed group discussions) and quantitative methods (survey) were utilised in order to determine the perceptions and numerical interpretation on poverty. Descriptive statistics(Microsoft excel (measures of central tendency on sample, testing hypothesis) and inferential statistics (generalisations both probability(cluster) and non-probability (purposive) sampling was conducted on data in accordance to chiefdoms and organised in proportional to size sampling so that every cooperative in crop production had an equal chance of being selected. The data analysis tools were SPSS and Microsoft excels based data analytics correl for conducting multiple coefficient correlations. The hypothesis was also analysed using T-test.Sequential analysis was conducted using mixed methods so that both results from quantitative and qualitative data to assist the researcher gain in depth understanding of the problem in multiple ways A one sample t-test was conducted on testing the hypothesis to determine whether the levels of poverty were still at 54 percent or more. A multiple coefficient correlation was also run in order to compare the three variables; type of crop grown, incomes and yields on poverty level. The dependent variables being type of crop grown, incomes, yields and independent variable was poverty level, a relationship between the three dependent variables was found to be moderate and positively skewed.

6.0. Discussion /interpretation

6.11. Overview

The purpose of this section is to analyze and discuss the findings and make policy recommendations to the policy makers on how Cooperatives in crop production can help alleviate poverty. The investigation also shed light on the role of Cooperatives and the relationship between membership to cooperative, incomes type of crop type grown, yields and poverty reduction.

6.12. Comparison of Key Findings and Research Objectives

Our analysis indicated that Cooperatives in crop production had positive influence on poverty reduction. As a matter of fact was also skewed towards the positive an indication of a relationship existing.

One of the key findings of this study is that Co-operative membership has a significant positive effect on members' income levels. These results aligns with the work of Mundia (Mukwalikuli Mundia,Chewe Nkonde,Francis Simui,Joseph Imasiku, 2022), who found that Co-operative participation in rural Zambia helped improve income stability for farmers. Apart from agriculture inputs, Co-operatives in crop production needed also the farming equipment.

However, the study also revealed that the impact of Co-operatives was more pronounced for members who had access to the Farmer Input Support Programme. However these results contrasts with the study, which found that various support rendered to agriculture Cooperatives did not show any improvement in their livelihood status to rural communities and that there was little to show in their access to basic needs enhancement. It also recommended that there was need for financial and equipment support to agriculture Cooperatives (Mukwalikuli Mundia,Chewe Nkonde,Francis Simui,Mwiya.S.Mufalali,Regina Muduli, 2023).

Our findings suggest that a combination of financial, input, equipment and extension support is crucial for the effectiveness of Cooperatives in crop production on poverty reduction.

6.2. Roles of Cooperatives in Crop Production at reducing Poverty

6.21. Access to cheaper farming inputs

The study suggested that Cooperatives provided a way to obtain cheaper agricultural inputs as (Munzele Paos, 2018) found that Cooperatives enabled their membership access to cheap input sources. In order to expand access to these subsidized inputs, as was the case of Kamangango Cooperative similarly recommended the establishment of more Cooperatives. Similarly this study found the need to form more Cooperatives to participate in crop production so as to exploit the opportunities of farming as a business. This was justified to a larger number of households that these groups covered. When more Co-operatives are formed, this presupposes that this is the only way to make empowerment initiatives inclusive. Thus will, in accordance with the conceptual framework, lead to the government increasing subsidies , which action is believed to have an incremental effect on poverty reduction due to precision in targeting and coverage. The main obstacles will be the small number of farmers that these programs initially reached (Pallavi Rajkhowa,Matin Qaim, 2021). This may exhibit the opposite effect of promoting the increasing reliance on government subsidy programs and exacerbating poverty.

6.22. Participation of Women and Youth

This study consistently found that the formation of additional Cooperatives with a focus on women and youth was obvious. Due to Soyabeans' fragile nature, these groups can effectively tend the crop well, and the women and youth are most suitable.

6.30. The Relationship between the Type of Crop grown and Poverty reduction**6.31. Crop Type Grown Versus Poverty Reduction**

This was focused on Cooperatives in crop production, the cornerstone of government policies aimed at reducing poverty. These Cooperatives were registered with the state and provided with various forms of support. In contrast, the prior studies conducted in Kabwe (Mukwalikuli Mundia, Chewe Nkonde, Francis Simui, Mwiya, S. Mufalali, Regina Muduli, 2023) demonstrated that Cooperatives had minimal impact on improving livelihoods. These studies did not focus on any particular category as they generalized Cooperatives compared to this investigation. However our study discovered a nexus existed as this factor was determinant to how much poor Cooperatives remained if no adjustment was made such as diversification in crop production. Most Cooperatives that depended on Maize still exhibited more vulnerability as opposed to the ones that had grown Soyabeans or groundnuts.

6.32. Asset Ownership

Contrary to Mundia's study on livelihoods in Kabwe, 70% of respondents in the FGDs especially those that had diversified crops grown like Soyabeans concurred that Cooperative members had demonstrated the ability to purchase assets like bicycles, mattresses, motorcycles, and even motor vehicles during the support period, which was an indication that they were determined to exit from extreme poverty situation.

6.33. Political interference

Regarding political interference, the discussions further revealed evidence that the subsidy programs were not free from political interference, as some of the participants or beneficiaries had a propensity to misuse their privileges by defrauding members because of their loyalty with the ruling party (Mukwalikuli Mundia, Sitali Wamundila, Daniel Siakalima, Chewe Nkonde, Francis Simui, 2021).

7.0. Summary, conclusion and recommendations

Several pro-poor policies have been put in place as part of the government's efforts to reduce poverty. FISP was one of the most prominent subsidy programs. According to this research, those who were part of the grant programs experienced a rise in their income. Higher income increases socio-economic status. People who had received FISP had built or purchased houses with iron roofs, bicycles and even motorcycles. For example, even sent children to school, able to afford three (3) meals a day, and had some savings in their bank accounts.

The increased income means that these households can start or promote small businesses in the rural communities.

The purpose of these subsidy programs is to change their lives. However, there were three major challenges facing these government initiatives.

Firstly, the sustainability of the subsidies must be questioned, as most beneficiaries were unwilling to exit these programs, thus the risk of promoting the dependency syndrome will continue. The Farmer Input Support Programme (FISP), Food Security Pack (FSP), Constituency Development Fund (CDF),

Sustainable Agricultural Financing Facility (SAFF) were aimed at supporting production of staple foods to reduce hunger and hopelessness among the citizens after the liberalization of the economy due to the structural adjustment programmes (SAP) of the International Monetary Fund (IMF) on third world economies. These were to reduce absolute poverty and to give a voice to the marginalized.

Secondly, there was an issue in implementation of the FISP because of Extension officers in the Ministry of agriculture conniving with Cooperative leaders to defraud rightful beneficiaries, hence weak safeguards in this programme were observed, coupled with poor utilization of input packs.

From the findings of the study, it showed that Cooperatives were tools for poverty reduction. The survey data indicated that 112 of the cooperative respondents had experienced a reduction in their poverty levels due to their proven abilities to have three(3) meals a day, acquisition of assets such as bicycles, mattresses, house ownership, agricultural land, etc. during the support period spanning from less than five (5) to 10years and beyond.

7.1. The roles played by Cooperatives in Poverty Reduction

The Cooperatives enabled the members to access cheaper inputs in the growing of their crops such as Maize through the crop packs obtained from government under the FISP, FSP, SAFF and CDF. This enhanced household food security as well as incomes. As a result of such programs citizens were empowered. It also enabled them acquire various assets. Perhaps emphasis should be to increase the number of Cooperatives especially women and youth led as this bracket of the population required more government support due to their vulnerability and plight. Furthermore these segments of the population are good at tendering crops such as Soyabeans and Groundnuts.

7.2. The relationship between the types of Crops grown with Poverty Reduction.

The Cooperatives in crop production can be used as tools for poverty reduction as the type of crops grown has a bearing on levels of poverty in reference to productivity. From the interviews in the FGDs, the Cooperatives growing Soyabeans exhibited resilience and were willing to graduate from these programs as their farming activities were more rewarding as the crop complemented incomes realized from Maize. Hence the study suggested the need to promote this crop so as to graduate more farmers from subsidy and ultimately poverty as well. Lastly, the type of crop grown is an indicator as to whether a beneficiary of subsidies has the ability to graduate or wean out from the program. This study suggested a moderate relationship existed between type of crop grown and poverty reduction. The relationship was almost positively skewed. However additional factors contributed towards non maximization of yields on crops grown such as late input delivery and planting. Crop production in Lufwanyama is rain dependent and no irrigation facilities existed to cushion times of drought or partial droughts. To some extent contending with the findings of Mundia (Mukwalikuli Mundia,Chewe Nkonde,Francis Simui,Mwiya.S.Mufalali,Regina Muduli, 2023) suggesting that life was not being improved by Cooperatives in some instances. But this argument falls off as these claims seem baseless to a larger extent as our findings could not substantiate them since this research reviewed to the contrary over these assertions.

8.0. Recommendations

Based on the findings of this study, the following recommendations are made;

8.01. Policy Support to Soyabeans Production

Policymakers should create favorable policies that support the production of cash crops like Soyabeans in rural communities. The promotion of cash crops such as Soya beans on larger scale is panacea to dependency by Cooperatives on Maize subsidies. The realization that Maize despite being a staple food the soils where it is grown, the law of diminishing returns takes prominence on yields on an annual basis due to both agronomic and climatic factors. Hence should be rotated by a legume such as Soyabeans as a mechanism towards sustainability and soil sustenance.

8.02. Alternating Maize with Soyabeans on FISP

In some years government can even alternate by issuing more Soyabeans packs to Cooperatives on FISP or SAFF and less Maize to boost its production in such a way that areas with good conditions (rainfall, soils and other agronomic factors) there is intensity in the growing of the crop and encourage private sector to be off takers in these markets with high production as opposed to the Food Reserve Agency (FRA) being the major player.

8.03. Strategy and Policy Rethink on Participation of Women and Youth

The strategies of implementing the subsidy programs such as the FISP, CDF, SAFF and FSP need to be reviewed from time to time. The government should consider increasing the participation of women and youth in Cooperatives such programs to support at least 30% women and 70% youth participation. This will enhance more women participation in Cooperatives and reduce turnover rate of members in Cooperatives. The women naturally tend to be loyal, have capabilities of growing crops such as Soya beans or groundnuts successfully demonstrated through their care for fields and children.

8.04. E-Government (MIS) and Curbing Corruption

Furthermore the subsidy programmes should adopt smart ways of targeting beneficiaries by adopting the systems such as ZIAMIS a form of Management information system (MIS) on all empowerment programs and implementing the electronic voucher (e-Voucher) system countrywide to curb human manipulation of these support systems to some extent. There is need for safeguards to be in place by government on all socio-economic empowerment programs and ensure all those found wanting by way of defrauding or sabotaging, face stiffer punishments prescribed by law to deter future culprits. Corruption should also be dealt with by employing professionals in these sectors and ensure they are devoid of political interference ensuring the beneficiaries utilize these crop and input packs as per intended purposes of the program.

8.05. Monitoring and Evaluation

Regular monitoring and evaluation mechanisms should be established to assess the impact of government subsidy programs targeting Cooperatives in crop production towards poverty reduction, in order to ensure that they remain responsive to members' needs.

9.0. Future research areas

Future areas of research should consider how to make Cooperatives sustainable entities that can reduce poverty without dependency on Government programs, devising mechanisms that can ensure total weaning from programs such as the Farmer Input Support Programme.

Other areas may consider researching on how Cooperatives can maximize productivity potentials of crops such as Soyabeans and reduce poverty without depending on Maize as the sole cash crop. The realization that Cooperatives by their nature are economic actors, people centered enterprises and democratic institutions therefore can create opportunities for jobs, livelihoods and income generation. Cooperatives contribute to social equity and are controlled by members.

Moving forward, future researchers should aim at investigating how Cooperatives can become self-supporting and effective as business units without full dependency on government subsidy programs through the entrenchment of entrepreneurship. Therefore areas of future research will be cardinal as they will augment this research and add value to the body of knowledge in contributing towards sustainable development goals.

Poverty reduction is a prime goal of the sustainable development goals (International Cooperative Alliance, 2018) it is not enough to state that a person having at least three (3) meals a day is free from hunger, but this should be researched further and determine the quality of meals in form of a balanced diet as well as other aspects such as food safety and nutritional value.

The Soya bean value chain needs to be exploited further by Cooperatives in crop production and more research in future requires extra effort as Soya beans is a cash crop that is on high demand as demonstrated in this inquiry. Among its uses are for both human and animal feed ingredients. Products of high value such as Soy chunks, Thobwa, soy coffee, herpes, porridge, milk, full fat soya, low fat Soya respectively.

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