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The Impact of Agricultural Cooperative Enterprises on household Income in Rural Communities of Kabwe District, Zambia

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***Abstract*-The study explored agricultural cooperatives enterprises on cooperatives' household income in Kabwe district. The study used 385 closed ended questionnaires, whilst descriptive statistics, Pearson Chi-square test of independence, Pearson correlation analysis, logistic regression and Propensity Score Matching models were used to analyze quantitative data. The findings of the study indicates that 78.5% of the cooperative members had access to credit, while only 13.99% of the cooperative non-members did have access to credit during the 2020/2021 farming season. The study indicates that being a cooperative member, farmers earned commodity income of K1484 higher than farmers who were not cooperative members and was statistically significant at 0.0001 p-value. Figure 4.2 also depict results on the effect of cooperative years on income, using a bar chart to present results. The bar chart shows the level of income for 2 years, 3-4 years, 5-6 years, 7-8 years, 9-10 years, 11-12 years, and 13-15 years. The results indicate that there is an increase in income as a farmer spend more years as a cooperative member.**

This study concludes that enterprising cooperatives improves income at household level and further suggest that inadequate allocation of financial resources is a major impediment to the development of cooperative structures at district level. The implication of this is that cooperatives receive less technical support and hence fail to achieve the goal of livelihood improvement of members. To circumvent the challenges that confront operations of cooperatives, it is inevitable that policy action should work towards enhancing support to the cooperative movement in order to spur livelihood improvement in rural communities of developing countries

***Index Terms*—Agricultural Cooperatives, Cooperative Members, Households, Rural Communities.**

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I. Introduction

The cooperative idea came to Zambia in 1914 when the European settler farmers formed the first primary cooperatives as a means of marketing agricultural produce to the newly opened copper mines along the Copper belt of Southern Zaire (now Democratic Republic of Congo) and Northern Rhodesia (now Zambia). With time, many cooperatives developed into well-organized entities within the agricultural and commercial sectors. The earliest cooperatives were restricted to the Europeans only, in order to protect the interests of the settler communities and were mainly found in the Eastern, Southern, Central and Northern Provinces of Zambia. (Lolojih, 2009).

Despite restrictions on the formation of cooperatives among Africans, several cooperatives emerged among small-scale African farmers in the early 1940s. In 1947, the colonial government was forced to allow indigenous Africans to form cooperatives through a Cooperative Ordinance. This was followed by the formation of a government department in the Ministry of Agriculture in 1948 that regulated cooperative enterprises (Mundia at el, 2021). This cooperative development policy reform enhanced the participation of African small-scale farmers in cooperative activities.

At independence, the newly elected government took an active role in the development of cooperatives through the newly created Department of Marketing and Cooperatives. According to Moonga and Mgemezulu (2006), the Government encouraged the formation of cooperatives at that time in order to stimulate members of local communities to participate in economic activities, equitably distribute financial resources to all rural areas, use cooperatives as economic tools for quick development and used cooperatives as agents for the implementation of Government policies.

In order to intensify and strengthen its support and control of the cooperative movement, the Government repealed the 1947 Cooperative Ordinance to give way to the Cooperative Societies Act of 1970, Cap 689 of the Laws of Zambia. Through this new Act, the Government itself had powers that enabled it to influence the day to-day activities of cooperatives. More importantly, the Government was able to inject massive assistance, in terms of finance and technical

expertise, to the cooperative movement. Donors joined the Government in this effort and also provided technical assistance and grants to needy cooperatives (Moonga and Mgemezulu, 2006).

In 1973, the Zambia Cooperative Federation (ZCF) was formed for the cooperative movement in Zambia. The Zambia Cooperative Federation Limited as an umbrella body was registered with the main aim of performing functions for the cooperative movement. The main function of the Zambia Cooperative Federation was to coordinate the function of cooperative promotion and development. Later in 1983 cooperatives were declared a mass movement by Zambia's sole political party, the United National Independence Party (UNIP). Through this measure, which included cooperative representation at the highest decision-making body of United National Independence party (UNIP), the cooperative movement became affiliated to the party. Also, in that same year the Ministry of Cooperatives was formed and given the responsibility of cooperative policy formulation. The Ministry included the Department of Marketing and Cooperatives (DMC) and the Cooperative College (Lolojih, 2009).

In 1989, the National Agricultural Marketing Board (NAMBOARD) that was responsible for the marketing and distribution of agricultural produce was dissolved, with its responsibilities transferred, along with its assets and liabilities, to ZCF. This development resulted in the restructuring of ZCF into 8 strategic business units, with a branch and depot network spanning the entire breadth of the country. At that time, the labour force of Zambia cooperative federation (ZCF) exceeded 5,000 people up to unstill 1991 (Mundia at el, 2022). The cooperative movement controlled over 90 percent of the agricultural sector through a network of active primary cooperatives, district cooperative unions and provincial cooperative unions. The cooperatives used a network of storage sheds to purchase agricultural produce from farmers who had farm supplies stores for distributing inputs; and assisted in the delivery of various consumer goods through cooperative consumer shops (Republic Of Zambia, 2007).

From 1991 to 1992, the Government liberalized the economy in line with the World Bank prescribed Structural Adjustment Program. This brought an end to the era of government sponsored and controlled cooperative development. The role of government shifted from direct involvement in the day-to-day activities of cooperatives, to providing an enabling environment in order to facilitate trade liberalization. This meant that the agricultural cooperatives lost the market monopoly they had and were consequently exposed to competition something to which they were not accustomed or prepared to (Mundia at el, 2023). The Zambia Cooperative Federation (ZCF) was negatively affected by these reforms, particularly with regard to its capacity to effectively oversee the growth of the cooperative movement. The reforms had since reduced Zambia cooperative Federation's ability to raise sufficient income to provide the services that it used to under government support.

II. RESEARCH METHODOLOGY

A. Introduction

This chapter outlines all the specific methods that was used in conducting the study. It outlines the research design, study population and sampling techniques used by the study, method of data collection, the type of research instruments that were used and the analysis model that was employed in determining the impact of agricultural cooperatives on cooperative members' household income in Kabwe district. The chapter therefore provides a complete view of the research approach, nature of the study, strategies and instruments used in achieving all the objectives of the research study.

B. Research Design

The research design is the conceptual structure within which the research is conducted. It is the basis for collecting, measuring and analysing data and interpreting observations. The important characteristics of a research design are the anticipated planning of the techniques that will be used to collect and analyze data, taking into account the research objective and the financial and temporal implications (Kothari, 2004). This study used descriptive, inferential and causal research designs for quantitative data from the questionnaires, and Churchill and Brown (2007) postulate that a descriptive design of research generally refers to determining the frequency with which something happens. Inferential design was used test associations between variables; causal design was used to determine factors affecting cooperative membership and impact of cooperative membership on livelihood.

C. Study Site and Population

A sample is a subset of the whole population that is selected for the study (Creswell, 2008). Currently, Kabwe District has 734 cooperatives, of which 668 are agricultural cooperatives (MCTI, 2021). The district was selected because it is one of the district with the highest number of enterprising cooperatives in the country, and since the study was targeting enterprising agriculture cooperatives, this made Kabwe district suitable for the study and hence selection. The sample size for this study consisted of 4 agricultural cooperatives which were purposively selected because they were active in agriculture enterprising activities, and a 30% precision was used to arrive at a sample size. The cooperatives comprised the sample size were Katobo women agricultural cooperative society, Bantu agricultural cooperative society, Mulungushi agro cooperative society and Kasosolo agricultural cooperative society. The study also targeted farmers in these areas who do not belong to a farmer cooperative.

D. Sampling and Sample Size Determination

Generally, a sample size of 30 and above is representative of the population of the study Yamane (1967). The study used purposive and simple random sampling to collect quantitative data from a survey through agricultural cooperative enterprising members. Structured questionnaires containing closed ended questions were used to collect data from the agriculture cooperative members. The sample size was determined by using the formula given by Yamane et al (1967), n=N/(1+N(e^2))

Where:
n= sample size (241)
N=the number of cooperative members (762)
e= desired precision level (30%)
The study also had a sample size of 144 farmer participants who were not members of cooperatives. Therefore, the study had a sample size of 385 participants.

E. Data Collection

Primary data was collected and used in the study for data analysis. Primary data is advantageous because it is the data collected specifically for the purpose of the study, even though it has disadvantages of time consuming and high costs effects. Data collection process started by identification of agricultural cooperatives engaged in entrepreneurial activities, and these cooperatives were selected purposively from different parts of Kabwe district, after the selection of agriculture cooperatives, the cooperative members were selected randomly using simple random sampling. Closed questionnaires were administered to the cooperative members in the purposively selected agriculture cooperatives.

F. Data Analysis

Descriptive statistics, thus frequencies and mean values were used in the data analysis process to address the objectives. The study further employed Pearson Chi-square test of independence, Pearson correlation analysis, and logistic regression and Propensity Score Matching models.

G. Logistic Regression Analysis

The study specifically used logistic regression analysis to statistically determine the factors affecting the cooperative membership. Logistic regression is used to model binary outcome variables, in which the log odds of the outcomes are modelled as a linear combination of the predictor variables (Statistics Solutions, 2023).
The Model was specified as follows:
y=a+b1x1+b2x2+b3x3+b4x4+⋯…bjxj (1)
From this regression model; y is the dependent variable (Cooperative membership) and x1, x2,….xj are the independent variables; b1, b2 …….bj are the odds ratios.

H. Propensity score matching (PSM)

The PSM model was used in this study to determine the impact of cooperative membership on livelihood improvement, in terms of crop production and income. Propensity score matching is a way of correcting treatment effect estimates by adjusting for confounding variables. According to Caliendo and Kopeinig (2008), there are steps in implementing PSM. These are estimation of the propensity scores using binary model, choosing a matching algorism, checking on common support condition and testing the matching quality.
Step 1: Model Specification
Logit model in this study was preferred due to the consistency of parameter estimation associated with the assumption that the error term in the equation has a logistic distribution (Ravallion, 2001; Baker, 2000). Therefore, the Logit model was used to estimate the probability of farmers' cooperative membership allotted to different characteristics. Therein, a dependent variable takes a value of 1 for cooperative members and 0 for Non-members.
P_i=P(Y=1 | X) (2)
In line with Pindyck and Rubinfeld (1981), the cumulative logistic probability function is specified as follows;

$$P_i = F(Z_i) = F[a + \sum_{i=1}^{m} \beta_i X_i] = \left[\frac{1}{1+e^{-(a+\sum \beta_i X_i}}\right] \quad (3)$$

Where e represents the base of natural logs, Xi represents the ith explanatory variable, Pi the probability that a farmer is a cooperative member, a, and βi are parameters to be estimated.

Interpretation of coefficients is made easier if the logistic model can be written in terms of the odds and log of odds (Gujarati, 1995). The odds ratio implies the ratio of the probability that an individual will be a member (Pi) to the probability that he/she will not be a member (1-Pi). The probability that he/she will not be a member is defined by:

$$(1 - P_i) = \frac{1}{1+e^{zi}} \quad (4)$$

$$\left(\frac{P_i}{1+P_i}\right) = \left[\frac{1+e^{zi}}{1+e^{-zi}}\right] = e^{zi} \quad (5)$$

Alternatively,

$$\left(\frac{P_i}{1+P_i}\right) = \left[\frac{1+e^{zi}}{1+e^{-zi}}\right] = e^{[a+\sum B_i X_i]} \quad (6)$$

Taking the natural logarithms of equation (3.5) will give the logit model as indicated below.

$$Z_i = ln\left(\frac{P_i}{1-P_i}\right) = a + B_1X_{1i} + B_2X_{2i} + \cdots B_mX_{mi} + e \quad (7)$$

If consider a disturbance term, μ_i, the logit model becomes

$$Z_i = a + \sum_{t=1}^{m} B_tX_{ti} + \mu_i \quad (9)$$

So the binary logit will become:

$$Pr(pp) = f(X) \quad (10)$$

Where pp is membership in cooperative by the farmer, f(X) is the dependent variable; Cooperative membership, and X is a vector of observable covariates of the households. The dependent variable will take a value of 1 for cooperative members and 0 for non-members.
In addition to the estimated coefficients, the marginal effects of the change in the explanatory variables on the probability of cooperative membership was also estimated. The interpretation of these marginal values is dependent on the unit of measurement of the explanatory variable. However, when the explanatory variable is a dummy, the marginal effects generally produce a reasonable approximation to the change in the probability that Y = 1, at a point such as the mean of the regressors.

Step 2: Defining the Region of Common Support and Balancing Tests
The region of common support needs to be defined where distributions of the propensity score for treatment and comparison group overlap. Balancing tests should also be conducted to check whether, within each quantile of the propensity score distribution, the average propensity score and mean of X are the same. For PSM to work, the treatment and comparison groups must be balanced in that similar propensity scores are based on similar observed X. The distributions of the treated group and the comparator must be similar, which is what balance implies. Formally, one needs to check if ˆP(X | T=1)= ˆP(X | T=0).
Step 3: Matching Participants and Non-Participants
The third step is to choose a matching algorithm based on the data available. Matching is a common method for deciding on control subjects who are matched to the treated subjects based on context covariates that the investigator believes need to be monitored. Different matching criteria can be used to assign participants to non-members based on propensity score. The most common matching algorithm are nearest neighbor matching (NM), radius matching (RM), and kernel-based matching (KBM).
Step 4: Matching Quality
In the fourth step matching quality tests could be done. Checking for matching quality whether or not the matching method can balance the distribution of various variables or not. If differences exist, there may be an indication of incomplete matching and remedial actions are suggested (Caliendo and Kopeinig 2008). The following step is to check whether the treatment introduced a distinction in the indicators of impact. The average treatment effect at the treated (ATT) is given by the distinction within the mean outcome of matched members and non-members that have common support conditional at the propensity rating.

I. Variables specification

Outcome Variables
The outcome variable for this study were; commodity income, area of production and quantity harvested. Besides that, the study also identified factors that influenced farmers' membership in cooperatives.
Dependent Variables
Cooperative membership
The dependent variable is cooperative member taking a value of one (1) and zero (0) if the farmers' are not members. The study aimed at determining the factors influencing participation in cooperatives.
Independent Variables: A number of factors were hypothesized to influence membership in cooperatives; included: Age, marital Status, gender, farm size, land tenure system, education, family size, and years in the village, credit access, market support and access to extension services.

III. RESULTS OF THE STUDY

A. Introduction

This chapter presents results of the data which was collected from farmers in rural areas of Kabwe District. There were two groups of farmers from which data was collected, farmers who belong to Cooperatives and farmers who didn't belong to any entrepreneurial cooperative. 241 of the farmers who participated in the study belonged to farmer cooperatives, while 144 of the farmer participants did not belong to any entrepreneurial cooperative. A total of 385 farmers participated in the study by responding to a structured questionnaire. In addition, the study conducted focus group discussions with farmers to obtain qualitative data. This chapter therefore presents results of the study in line with the study objectives. The presentation will start with demographic characteristics of the participants, then quantitative results, and lastly qualitative results will be presented in line with the objectives.

Table 4.1 Demographic Characteristics of the Participants

	Cooperative Members	Non-members
Variables	Mean (Std. Dev)/%	Mean (Std. Dev)/%
Female_gender	40.72%	40.23%
hh_age	37.0989 (12.8067)	35.26 (13.0267)
hh_education	3.2721 (4.0248)	3.9935 (4.2013)
hh_married	71.01%	72.59%
Village_years	8.9414 (4.3117)	8.4840 (4.3775)
Farming_occupation	87.62%	90.38%
Household_size	3.3485 (1.5929)	2.8484 (1.0204)
Household_size	3.3485 (1.5929)	2.8484 (1.0204)
Credit_access	78.50%	13.99%
Extension services	48.69%	43.32%
No land title	72.15%	81.34%
Farm size (ha)	2.1725 (2.1271)	1.8607 (1.6092)

The results in table 4.1 shows results on the demographic characteristics of the respondents. Concerning gender distribution, 40.72% of the participants who are members of cooperatives were female, while 40.23% of the non-cooperative members were female. Concerning age, the mean age for cooperative members was 37 years, while the mean age for non-members was 35 years. The mean years of education for cooperative members was 3 years, and 4 years for non-members. 71.01% of household heads who are cooperative members were married, while 72.59% household heads who are non-members were married. The results also shows that the mean years of staying in the village for cooperative members was 9 years, and 8 years for non-members. The main occupation for 87.62% of the cooperative members was farming; however, farming was the main occupation for 90.38% of the non-members. The mean number of household size for cooperative members was 3, and for non-members, the mean household size was 3 as well. The results further indicate that 78.5% of the cooperative members had access to credit, while only 13.99%

of the cooperative non-members had access to credit during the 2020/2021 farming season. 48.69% of the cooperative members group had access to extension services, while 43.32% of the non-members group had access to extension services. 72.15% of the participants who are members of cooperatives had no title deeds for their farmland, while 81.34% of the participants who are non-members had no title deeds for their farmland. The study also found that the mean farm size for the participants who are cooperative members was 2.17 hectares, while for non-cooperative members the mean size was 1.86 hectares.

4.3 Effects of agricultural cooperative enterprises on household income and agriculture enhancement.

Table 4.3 Impact of agricultural cooperative enterprises on household income

Treatment-effects estimation					Number of obs =	957
Estimator: propensity-score matching					Matches: requested =	1
Outcome model : matching						Min = 1
Treatment model: logit						Max = 3
Commodity income	Coef.	AI Robust Std. Err.	z	P>z	[95% Conf.	Interval]
ATE						
cooperative_member (1 vs 0)	1483.873	144.9227	10.2	0.000	1199.83	1767.916

The study used Propensity Score Matching to statistically determine the impact of cooperative enterprises on household income. From table 4.3; the study obtained that being a cooperative member, farmers earned commodity income of K1484 higher than farmers who were not cooperative members. The results clearly showed that cooperative membership has significant impact on increasing income from commodity sales. The results were statistically significant at 0.0001 p-value.

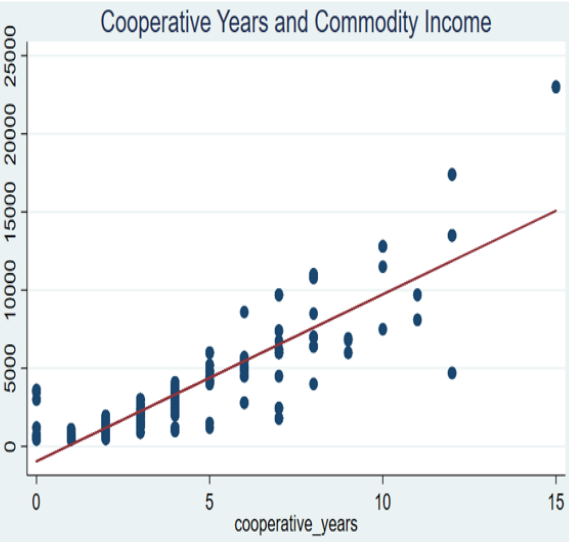

Figure 4.1 Relationship between Cooperative years and Commodity Income.

The study assessed the relationship between the years a farmer has been a cooperative member and the income levels. The results in figure 4.1 show that cooperative years has significant positive effect on increasing income level, as can been seen by the upward slopping fitted line. The more years a farmer spend in a cooperative, the higher the income level.

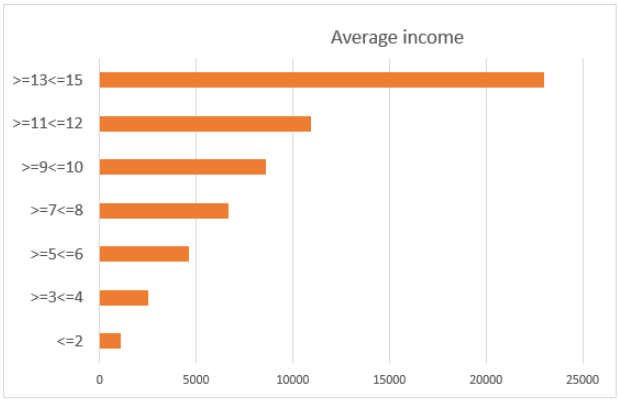

Figure 4.2 Relationship between Cooperative years and Commodity Income

Figure 4.2 also depict results on the effect of cooperative years on income, using a bar chart to present results. The bar chart shows the level of income for 2 years, 3-4 years, 5-6 years, 7-8 years, 9-10 years, 11-12 years, and 13-15 years. The results indicate that there is an increase in income as a farmer spend more years as a cooperative member.

Table Association between cooperative years and commodity income

Variables (X/Y)	Commodity income	Cooperative years
Commodity income	1	
cooperative years	0.8802*	1

Test of Ho: cooperative years and Commodity income are independent

Prob > |t| = 0.000

In addition, the study performed a Pearson correlation analysis to determine an association between cooperative years and income. The study found a correlation coefficient of 0.8802, with a p-value of 0.0001, indicating that farmer cooperative years has significant strong effect on increasing income level.

Table 4.7 Association between Cooperative Membership and Credit Access

		Access to Credit		
Membership		0	1	Total
	0	1,340	388	1,728
	1	297	2,595	2,892
Total		1,637	2,983	4,620

Pearson chi2 (1) = 2.1e+03 Pr = 0.000

Cramér's V = 0.6806

The study performed Pearson Chi-square test of independence to determine an association between cooperative membership and credit access. The results in table 4.7 above indicate that belonging to a cooperative has a significant positive effect on increasing access to credit by

the farmers, as indicated by the Cramer's V (0.6806), statistically significant at 0.0001 p-value.

IV. Conclusion

In line with the first objective, many factors hindering the participation/engagement of members into enterprising agricultural cooperative were explored. The reasons hindering the engagement of most members into enterprising agriculture cooperatives are as follow; inadequate cooperative training, it was discovered that majority of cooperatives never received any cooperative training in the year 2021 and this created cooperative knowledge gap. The second reason was inadequate cooperative inspection among cooperatives in Kabwe district, and this was due to lack of financial support from the government and donors to the cooperative department at district level and lack/poor transport at district level. This also contributed to poor performance of cooperatives in Kabwe district, as cooperative members of staff could not manage to have access to the cooperatives. The cooperative staff structure at district level is also the contributor, as it only has two positions slots not enough for entire district.

From the findings, the study concludes that; the mean years of staying in the village for cooperative members is 9 years, and 8 years for non-members. The main occupation for 87.62% of the cooperative members was farming; however, farming was the main occupation for 90.38% of the non-members. The study further concludes that 78.5% of the cooperative members had access to credit, while only 13.99% of the cooperative non-members did have access to credit during the 2020/2021 farming season. 48.69% of the cooperative members group had access to extension services, while 43.32% of the non-members group had access to extension services indicating the positive contribution of agriculture cooperatives to the livelihood of the cooperative members.

From the findings, the study further concludes that; age has a positive effect on being a cooperative member, with an odds ratio of 1.0139. As the person grows older, they are more likely to join cooperatives. Household size is also found to have a positive effect on joining cooperatives (1.7444 odds ratio), the bigger the family size, the more likely there will be a cooperative member. Credit access has a significant positive effect on joining a cooperative (31.948 odds ratio). Access to extension services has a significant positive effect on joining entrepreneurial cooperatives (1.472 odds ratio). Farmers who access extension services are more likely to be members of cooperatives. Farm size has a negative effect, the bigger the farm, the less likely a farmer will be a member of an entrepreneurial cooperative (0.8946 odds ratio. Education has a negative effect on joining cooperatives, the higher the qualifications a person has, the less likely the person will belong to a cooperative. All the results are statistically significant at 0.05 p-value. The other factors, being married, being female, years of staying in the village, not having title deeds, and market access has no significant effect on cooperative membership.

The study concludes that being a cooperative member, farmers earned commodity income of K1484 higher than farmers who were not cooperative members. The results clearly shows that cooperative membership has significant impact on increasing income from commodity sales. The results are statistically significant at 0.0001 p-value.

The study concludes that farmers who belongs to cooperatives have 0.751 hectares of crop production higher than farmers who do not belong to cooperatives. This indicates that cooperative membership has significant impact on increasing area size of crop production. The results were statistically significant at 0.0001 p-value.

The study also concludes that cooperatives membership has a significant impact on quantity harvested by farmers, the results indicated that cooperative members harvested 37*50kg bags higher than farmers who did not belong to cooperatives.

The study concludes that cooperative membership has a positive effect of on livelihood improvement. This is supported by a Pearson Chi-square value of 481.93, which was obtained, with a p-value of 0.0001 and Cramer's V test to determine the direction of the effect, cooperative membership has a significant positive effect on improving livelihood in terms of household food security. Therefore, enterprising agricultural cooperatives have significant effect on improving livelihood.

From the findings, the study is concluding that there is a positive relationship between the years a farmer has been a cooperative member and the income levels. The study concludes that cooperative years has significant positive effect on increasing income level, as can been seen by the upward slopping fitted line. The more years a farmer spend in a cooperative, the higher the income level. This conclusion of the study is supported by Pearson correlation analysis to determine an association. The study found a correlation coefficient of 0.8802, with a p-value of 0.0001, indicating that farmer cooperative years has significant strong effect on increasing income level.

The study concludes that there is a positive relation between cooperative membership and credit access. The results indicates that belonging to a cooperative has a significant positive effect on increasing access to credit by the farmers, as indicated by the Cramer's V (0.6806), statistically significant at 0.0001 p-value. The study further concludes that there is an association between cooperative membership and access to subsidized inputs, the study's findings gave significant positive effect between cooperative membership and access to subsidized inputs, as indicated by the Cramer's V (0.2906) and the p-value of 0.0001.

The livelihood of cooperative members from the enterprising cooperatives improved in various aspect, ranging from the income levels, food security, faming equipment, improved shelter and knowledge and skill acquisition. The biggest challenge was because of the small number of cooperatives that are enterprising, as they were the only ones contributing to livelihood improvement to its members.

The study concludes that, there are four types of strategies used by cooperatives in Kabwe district, and these are categorized as internal and external strategies. Under internal strategies, cooperatives in Kabwe are using diversification and size increment of their farmlands and businesses. Under diversification, cooperatives have moved from only growing one crop to several other crops, for income, food security and generally reduction of risk of growing one crop. On the increment in terms of farm size or business size is another strategy with the belief that, this will improve their food security and income levels. On the other hand, cooperative training and inspection are external strategies used by cooperative members of staff at district level to enhance the

enterprising of cooperatives. This helps to guide the cooperators in their business activities, as well as imparting knowledge and skills for enhancing enterprising activities.

V. RECOMMENDATIONS

From the findings of the study, the following are the recommendations;

i. The study recommends the government to improve on the allocation of funds to the department of cooperatives, as doing so will enhance the service provision in form of cooperative training and inspection which are very much cardinal to the development entrepreneurial activities of agriculture cooperatives, which ultimately leads to livelihood improvement of cooperatives members in the rural communities of Kabwe district.

ii. The department of cooperatives need to restructure its structure at district level, as two members of staff are not enough to run the district. Improving the staffing levels will improve the rate of contacts (through cooperative training and Inspection) between the members of staff and cooperative members; this will improve the entrepreneurial activities of the cooperatives and finally their livelihood.

iii. The government/Donors to help improve the current transport challenges faced by members of staff at district level. As most of the districts, do not have reliable transport to cover their districts. By providing reliable transport to the department, cooperative training and inspection will be enhanced by the department, which will be improving the entrepreneurial activities of cooperatives in the rural communities and ultimately improving the livelihood of cooperative members in the rural communities.

iv. There is need to enhance financial and equipment support to agriculture cooperatives, as this will boost their entrepreneurial strategies and ultimately livelihood improvement in the rural communities of Zambia.

v. Government to consider cooperatives as business entities established to improve the lives of rural communities and not political entities to be used for gaining political mileage. As considering them as political models hinders their business progression and there contribution to livelihood improvement.

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