

CHAPTER I

INTRODUCTION

1.1 Background of the Study

The co-operatives sector was established to give benefit to its members and help to increase the standard of living of people, especially among the low and middle-income population (Khan et al., 2016). In addition, it is also one of the good channels of organizing rural people to reduce the problem seen in the society and to foster economic and social development (Grace, 2011). According to the National Cooperative Federation of Nepal, it is an autonomous association of people, united voluntarily to meet their common economic and social needs.

Tiwari (2016), states that the main goal of cooperative organizations is to improve the socio-economic status of rural people by creating cooperation and mutual support among each other. Furthermore, Cooperative policy is also believed as a model to serve its member most blessedly (Patnaik & Roy, 1988). Policymakers and community developers are keen to develop cooperatives as business alternatives that could address local needs and promote local economic growth (Kimberly, 2002). Therefore the main purpose of a cooperative is to allow individuals to come together and utilize their resources to achieve a common goal (Tchami, 2007).

Uchendu (1998), noted that the original impetus for the organization of cooperatives in the developing countries came from agriculture, or more precisely, from the marketing of cash crops for export. Since then cooperative development has taken different forms and dimensions. Many types of cooperatives have been established worldwide to meet their member's common, economic, social, and cultural needs. According to the department of cooperative, Nepal the major types of co-operative societies operating in Nepal are saving and credit, multipurpose, dairy, agriculture, fruits and vegetables, bee keeping, tea, coffee, consumers, science and technology, and Energy. And around 6 million people are members of 34,512 cooperatives and more than 60,517 people are employed directly in the Cooperative business in Nepal. According to International Cooperative Alliance (ICA) report, in 2019 more than 12 % of people on earth are member of a cooperative, 3 million cooperatives are operating in the world and 280 million people are employed in different cooperatives which is 10% of the total working population.

Agricultural cooperatives have played an important role in rural communities, where they are an integral part of the social fabric. They encourage democratic decision-making processes, leadership development, and education (USDA, 2002). In the meantime agricultural cooperatives also plays an important role in food production and distribution (ICA,2009). Woldu et al. (2013) Reflect agriculture cooperative as a vital foundation that helps farmers to overcome the limitations through collective bargaining power and by reducing the risks that they face in the market.

Ashtankar (2015), had seen cooperative sectors as extremely important factors for the development of the agriculture sector not only because it supplies agricultural credit to the framers but also delivers goods and services in vital areas where state and private sectors can't do much. The functioning of cooperatives can create great changes at a personal and local level, and also help to solve the global threefold human crisis of deepening poverty, social disintegration, and environmental degradation (Rutle, 2008).

Although cooperatives are considered as an appropriate tool of rural development they are facing critical challenges, which retain them from their positive role. Some of the challenges of cooperatives are low institutional capacity, inadequate qualified personnel, low entrepreneurship skill, lack of financial resources, lack of market information, poor member's participation in the different activities such as financing the cooperative, patronizing the business activities of the cooperatives, control and supports (Dawit, 2005).

1.2 Statement of the Problem

Cooperatives are formed to solve the common needs of their members. Cooperative movements have become the forefront for helping communities to achieve socio-economic development in Nepal. Similarly, cooperatives are also taken as important instruments for economic growth and balanced development. Therefore, the government of Nepal has declared cooperative as one of the pillars of the Nepalese economy. Because cooperatives seem to be the best vehicle for fighting poverty and reducing inequality in society.

Cooperatives can play a pivotal role in enriching the economic development of a nation by uplifting the economic conditions of the people. Cooperatives are a popular community organization that helps to create self-employment generations through their saving, credit, production, and marketing strategies. Empirical studies across the

country show that cooperatives have played significant roles in economic development through the production, distribution, and marketing of farm inputs and supplies. It also provides training, seminars, and credit facilities to its members. Because of this reason cooperative is taken as one of the important factors for the development of the agriculture sector

Although many research and studies have been performed in the cooperative sector, a limited number of study is found in the analysis of agriculture cooperative. Therefore this study tries to analyze the income and profit of cooperatives, more specifically, this study answers the following questions:

- a. What is the present status of agriculture cooperatives in Lalitpur district?
- b. What is the income and profit trend of agriculture cooperatives in Lalitpur district?
- c. What are the factors affecting the agriculture income of agriculture cooperatives in Lalitpur district?

1.3 Objectives of the Study

The general objectives of the study is to analyze the factors affecting the income of agricultural cooperatives of Lalitpur districts and the specific objectives are:

- a. To analyze the present status of agricultural cooperatives in Lalitpur district.
- b. To analyze the income and profit of agricultural cooperatives in Lalitpur district.
- c. To analyze the factors affecting the agriculture income of agriculture cooperatives in Lalitpur district.

1.4 Hypothesis Testing

In this study, the agriculture income of agriculture cooperatives is a dependent variable whereas; area of land (AL), Fertilizer (F), wages (w) and plant and machinery (P&M) are independent variables. Thus, the hypothesis constructed for this study is as follow:

- Null Hypothesis; (H_0):-There is no significant relationship between dependent and independent variables
- Alternative Hypothesis;(H_1):-There is a significant relationship between dependent and independent variables

1.5 Significance of the Study

This study of agriculture cooperatives in Lalitpur areas was intended to discover the fact about the economic aspect of agriculture cooperatives. In the meantime, it has also tried to explore the present status of agriculture cooperatives and factors influencing the income of agriculture cooperatives of the study area.

Firstly the result or finding of this research shall be important to know the present status of agriculture cooperatives and to know the factors influencing the agriculture income of cooperative in study area. Secondly, the findings of the study might be helpful to make plan and policies for cooperative development and income generation. And finally, the findings of the study may be equally important to different NGOs, INGOs who work in the field of agriculture and cooperative sectors during planning and policymaking as well as the researcher in the future to the government to implement in development perspectives

1.6 Limitations of the Study

This study carried out in a limited time and budget cannot comprise all the aspects related to agriculture cooperatives. Therefore, this study is not free from the following limitations. The major limitations of this study were as follows;

- This study was conducted only in Lalitpur district therefore, the finding of the study cannot be generalized for Nepal as a whole.
- This study includes only agricultural cooperatives therefore, the outcomes might not be generalized in other types of cooperatives like saving and credit cooperatives, multipurpose cooperatives, dairy cooperatives etc.
- Only 29 agriculture cooperatives were taken for the study therefore, it doesnot represent the overall cooperatives.
- Data were collected from the available person of the cooperatives. So, the accuracy of the data depend upon responses of the respondent.

1.7 Organization of the Study

The report has five chapters. Chapter 1 introduces the study and contextualizes the investigation by discussing the research area and the problem statement, stating the research questions, objectives, and justification of research. Chapter 2 includes a

critical analysis of the literature around the topic, highlighting the research gap. Chapter 3 discuss the research methodology, and Chapter 4 is data presentation and analysis. At the end Chapter, 5 concludes and provides findings.

CHAPTER II

REVIEW OF LITERATURE

This chapter consists of review of existing literature. It is a way to discover what other researchers in the area of the problem have uncovered. A critical review of the literature helps the researcher to develop a thorough understanding of previous research works related to the study. It is also a way to avoid investigating problems that have already been answered. The relevant literature and article from national and international publications as well as unpublished reports, thesis, and journals, etc. related to cooperatives are reviewed in these sections.

Kontogeorgos et al.(2014) analyzed Greek farmers' willingness to invest in agricultural cooperatives. The data were collected from a field survey of 235 members of agricultural cooperatives in Thessaly and Western Macedonia regions. Logistic regression was used to analyze and interpret the results. The result demonstrates that education,urban residence, participation in the cooperative's administrative procedures, as well as the farmer's perceptions of possible future strategies and previous managerial failures can positively affect the member's decision to invest in the cooperative. On the other hand, the existence of a successor in the farm negatively affects willingness to invest in the cooperative. Therefore, the researcher thinks that this issue requires further research.

Njagi (2014), studied the factors that influence the performance of cooperatives in Mbeere North Sub-County. Systematic random sampling was used in data collection from active cooperatives in the study area. 400 members were taken as a representative sample. Data collection was carried out using a semi-structured questionnaire and an unstructured interview schedule. Data analysis was done by descriptive statistics. The study indicated that membership size, education level,training, member's income,and quality of management influence the performance of cooperatives. Since, the results indicate that successful cooperatives have a higher extent of achieving set objectives, a high level of member participation, and higher management capacity. It was recommended that membership size,

education level, and training, level of income, and quality of management are considered as vital factors to improve the performance of cooperatives.

Ogunleye et al.(2015) examined the socio-economic factors affecting farmer's participation in cooperative societies in Surulere local government area of Oyo state. Primary data were taken from 40 respondents. Descriptive statistics and chi-square test was used to analyze the data. The result shows that marital status, Education, Household size, and Primary occupation were the significant social-economic variables affecting participation in cooperatives. Furthermore, limited members fund management and leadership problems, low level of educated members were the main barriers to farmers participation in cooperative societies.

Bagchi (2016) investigated the economic activities of the co-operatives in Morang district of Nepal for the period from 1997 to 2007. Descriptive as well as an analytical research design was used to find the answer to the central question: How the development of cooperatives was possible during the recent insurgency period in Nepal? The study shows that cooperative movement can foster integrated and sustainable development during a period of insurgency.

Thaba (2016), determined the factors affecting the proper functioning of smallholder agricultural cooperatives in Lepelle Nkumpi municipality. Primary data were taken from 140 active cooperative members from 13 registered agricultural cooperatives by using the simple random sampling method. Discriminate analysis was used to analyze the data. The result shows that the proper functioning of agricultural cooperatives depends upon a high level of training to its members, interaction with other stakeholders, and satisfaction with the training and assistance received. On the other hand, dysfunctional smallholder agricultural cooperatives were characterized by a high age group, low level of meeting attendance, large cooperative size, dissatisfaction of assistance, and a high number of females. This result implies that government and other stakeholders also support agriculture cooperatives but there are still those that are dysfunctional as indicated above. Therefore agriculture cooperatives still need more support in terms of management, financial, and education.

Mubirigi (2016), studied the factors influencing the performance of agricultural cooperative members in Gatsibo District Rwanda. Primary data were collected from 71 cooperative members. The researcher used correlation and regression techniques together with the statistical package STATA to analyze and interpret the data. The result identified several factors that influence agricultural cooperative performance such as shortage of youth in agricultural cooperatives, poor implementation of land, absence of input savings mechanism, lack of knowledge on the development of action plan and annual budget, low level of accountability and transparency in cooperatives, poor value addition and low level of quality checks, excessive reliance on external assistance as well as low replication of modern agricultural practices at the household level to boost members productivity. However the researcher suggested possible remedial measures that may help in fostering the performance of agricultural cooperatives like reduction of external assistance, improvement member's empowerment through training and education, and promotion of extension services programs as well as quality checks up of agricultural inputs and engagement of agricultural economics students and youth in cooperative.

Hong (2017), identified factors that impact on sustainable development of agriculture cooperatives in Mekong River Delta. Primary data were collected from 80 agriculture cooperatives in three provinces of travinh, bentre and soctrang in the Mekong river delta. The article uses a multivariable regression model to analyze and interpret the data. The results show that labor, business capital, connection with input enterprises, and consumption of products affect the efficiency of business activities of agricultural cooperatives. Through research results, several solutions for the development of sustainable agricultural cooperatives in the Mekong River Delta will be recommended.

Linh et al. (2017) studied the Factors Influencing Technical Efficiency of Agricultural Cooperatives. Primary data were collected from 45 agricultural cooperatives in Dong Thap province of Vietnam using a three-stage DEA model. The results showed that efficiency scores of cooperatives in the third stage slightly increase compared to those in the first stage. In addition, the study also indicates that technical training and infrastructure index are significant variables that have impacts on the technical efficiency of cooperatives. Specifically, while technical training is found to be a

favorable factor that has negative effects on slacks of inputs leading to improvement in cooperative efficiency, the opposite is true for the infrastructure index. The study suggests service quality of cooperatives needs to be improved to encourage the use of member farmers, meanwhile attracting non-member farmers to join the cooperative such that the double missions of cooperatives can be achieved, that is, to pave the way for food security and rural development.

Gashaw and Kibret (2018), identified the factors influencing the decision to membership in agricultural cooperatives in Oromia and Southern Nations, Nationalities, and Peoples' Region. A multi-stage stratified random sampling technique was used to collect data from 335 smallholder farmers using a semi-structured interview questionnaire. Econometric methods of data analysis (using binary probit model) were used to analyze the data. The result shows that age of the household head, need to access credit, need to access agricultural inputs, perception of farmers towards the attractiveness of dividend distributed, awareness about the socio-economic importance of primary cooperatives, trust towards cooperative management committees, households' need to access cooperative as a market outlet, and the need to access training from primary cooperatives were found to significantly determine smallholder farmers' decision to joining agricultural cooperatives. From the finding, it is, therefore, recommended to strain on improving the farming experience and exposures of farmers, increasing cooperatives' market demand for agricultural commodities/products, distribution of adequate dividend, provision of adequate credit services and agricultural technologies/inputs, organizing frequent capacity building training for farmers, and improving awareness of farmers about the socio-economic importance of cooperatives for encouraging and pooling smallholder farmers to join primary cooperatives in Ethiopia.

Joseph et al. (2018) tried to ascertain prospects of cooperative society for sustainable agriculture among smallholder farmers in Benue State, Nigeria. Data were collected from eighty (80) respondents using a questionnaire. Frequency, percentage, mean score, and factor analysis were used for analyzing data collected for the study. Findings indicate that Major reasons for joining cooperative society were access to credit facilities (38.8%), greater access to farm inputs (26.2%), raise in the standard of living (11.2%), among others. Results on benefits of cooperatives society include

access to information (94.5%), increases members income and food security (91.8%), high productivity/ increase in output (90.4%), easy access to loan facilities (89.0%), improved market competition and expanded market opportunities (89.0%), pulling of resources together (86.3%), easy access to credit facilities (80.8%), greater access to farm inputs (75.3%), availability of labor (61.5%), etc. Factors influencing the performance of cooperative society were named institutional, funding, and input-related variables.

Tewodro and Atnafu (2018), identify the determinant factors of multipurpose cooperatives performance. Primary data were collected from 272 respondents using simple random sampling. Structural Equation Modeling (SEM) was used to measure the direct and indirect effects of the constructs. SEM results showed that only five factors have a significant positive impact they are members' related factor, cooperative management factor, marketing factor, financial factor, and infrastructural factors. Furthermore, the indirect path coefficient value shows that members-related factors and Cooperative management factors have a strong positive indirect effect on primary multipurpose cooperative performance. Implications of this research work will help the cooperatives societies and cooperative promotion office to identify the major determinants factors that affect the performance of multipurpose cooperatives.

Mmaril and Thinyane (2019), studied the performance of Saving and Credit Cooperative Societies (SACCOS) in Maseru District, Lesotho. A sample size of 369 respondents was computed by using a simple random sampling technique. Analyses of data were done by using different techniques which include: mathematical equations (i to vii); different financial ratios; tables; graphs; bar charts and other types of descriptive statistics like mode and percentages. It was found that the socio-economic characteristics of members were supportive of the financial performance of the SACCOS. Furthermore, SACCOS in the study area achieved high performance in terms of ratios of members' capital; loan delinquency; volumes of savings in the SACCOS; and growth of total assets. On the other hand, the SACCOS realized poor financial performance in terms of a ratio of fixed assets to total assets; and share capital owned by members

2.3 Nepalese Context

Neupane (2006), concluded that co-operative can play a vital role in the Nepalese economy. Although it had a very poor contribution to the economy at present. If management and business operation capacities are improved then it could be better prospects for the co-operatives enterprises because it can generate higher prospects of employment and economic surplus, which leads to poverty alleviation.

Acharaya (2009), evaluated the situation of members participating in rural agricultural cooperative societies. The researcher has made a comprehensive analysis on the performance of 26 agricultural cooperative societies from Jhapa, Morang, Saptari, Bara, Chitwan, Nawalparasi, Kaski, Dang, Banke, Bardiya and Daduldhura districts of Nepal. Altogether 286 members and non-members, as well as committee members, were selected as the individual sampling unit. The study found that especially poor and marginal farmers needed credit from the cooperatives for agricultural inputs. The research found that small and marginal farmers, who benefit most from the cooperatives, are often by passed.

Malla (2014), in his thesis, found that as the members are the only user and suppliers of the service of the cooperatives, it is rather useless to drive cooperative without the active participation of the members. Participation of members is essential for cooperation to function effectively. In this way, results in a stronger sense of “ownership” on the part of the member. The economic development of the cooperative is an essential requisite for existence and long-term survival. Share capital, reserve funds, and total deposits play a vital role in the economic development of the cooperative organization. On the other hand, financial monitoring and analysis system is also essential for maximizing profit.

Neupane et al. (2015) investigated the impact of cooperatives on farming methods and the socio-economic status of the farmers. 80 households from Devdaha V.D.C. and Manpakadi V.D.C of Rupandehi District were selected for the study. Data were collected using random sampling. Among them, 40 were involved in cooperative, and 40 were not involved in cooperative. A comparative analysis was done to find the difference between cooperative and non-cooperative farmers. The study finds that

there is a significant impact of agriculture cooperatives in the farming practices making positive changes on the livelihood of the farmers involved in cooperatives.

Paudel and Khanal (2016), determined liquidity risk and investment risk of Nepalese cooperative society. Primary data were collected from 126 cooperatives of Kathmandu valley. Data were analyzed by using correlation and regression analysis. The finding of the result shows that the big-sized cooperatives are lacking a proper amount of liquidity, and also suffer from liquidity risk. Moreover, the finding also suggests that a strong permanent capital base has a significant positive influence on the adequate liquidity of the cooperatives. Similarly, cooperatives having higher credit to deposit ratio have liquidity deficit. The spread model suggests that cooperatives bearing a higher amount of investment risk are utilizing their assets efficiently, and holding an adequate amount of long-term sources of funds. Similarly, a big-sized cooperative has abided with a lower degree of investment risk.

Poudel and Pokharel (2017), studied the contribution of SFCL (small farmers cooperative limited) on the socio-cultural and political empowerment of Nepalese women. 522 Primary data were collected from the Ilam district. The data were collected by applying the mixed method. The Census method was used for this study. The analysis of data found that there was a significant difference in socio-cultural and political empowerment of women after involving in the SFCL program. Women have been empowered to maintain social relationships, reduce gender disparity, involve in different social programs, and participate in different political activities through SFCL activities. Women have expanded their network of relationships through saving and credit programs. This study argues that women's access to economic resources changes their social status at the household and community levels.

Nepal and Tiwari (2017), studied the impact on livelihood changes of members after involvement in cooperatives. This study applied a descriptive and analytical research design. A number of remarkable contributions of cooperative include: saving collection, credit investment and socio-economic improvement its member and society. The cooperatives function for socio-economic development with the strong policy of being a nonpolitical and unbiased with no discrimination of any kind on religion, caste and gender basis. Study shows that the average land holding for

cultivation purpose has increased after joining the cooperative. The socio-economic status of cooperative members has changed through income generation activities. In this study, the assessment shows that the income and expenditure both have increased after membership.

Puri and Walsh (2018), examined governance practices and their impact on the performance of selected Nepalese cooperatives. 400 sample members from eighteen primary cooperatives in provinces 3 and 6 of Nepal have been identified by stratified random sampling technique to collect primary data with a semi-structured questionnaire. The collected data have been analyzed using SPSS (version 23). Statistical tools like regression, correlation and chi-square tests were applied. The findings revealed that there is significant and positive relationship between professionalization; accountability and performance of cooperatives. Similarly, there are insignificant but positive relationships between participation; transparency and performance of cooperatives. However, there is an insignificant and negative relationship between legitimacy and performance of cooperatives. In conclusion, the performance of cooperatives depends on existence of factors of good governance such as legitimacy, participation, professionalization, accountability and transparency with honesty.

2.4 Research Gap

Thus, the literature review showed that there is a significant number of studies at the international level but very few studies are available in the case of Nepal. Different research done in Nepal is related to poverty alleviation, members participation, impact on farming method and socio-economic status of the farmers, liquidity risk and investment risk of Nepalese cooperative society, contribution of small farmers cooperatives on socio-cultural and political empowerment of Nepalese women and performance of Nepalese cooperatives but no studies are available in case of factors affecting the income of agriculture cooperatives in Nepal. Therefore, this study tries to bridge this gap.

CHAPTER III

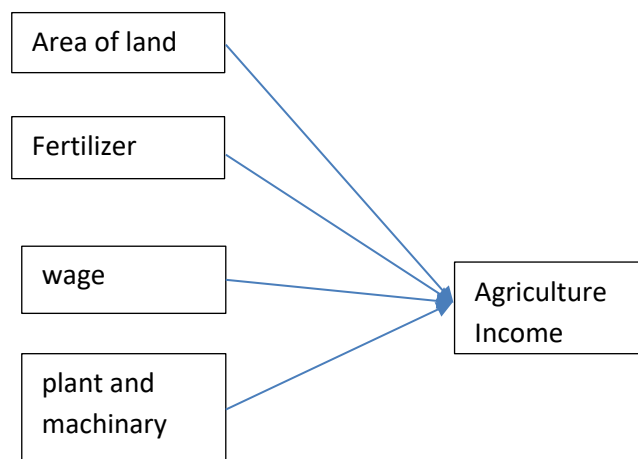
RESEARCH METHODOLOGY

This chapter provides the detail of the procedures adopted for the present research. The details of the research design, data collection techniques, nature and sources of the data analysis techniques and the introduction of the study areas have been presented.

3.1 Conceptual Framework

The conceptual framework always acts as the mirror to visualize the variables (explained and explanatory) participating in the research. Many researchers have related several variables in existing literature affecting the agriculture income of cooperatives. Therefore, based on the literature review the conceptual framework of the study is presented below.

Figure 3.1
Conceptual Framework of the Study



3.2 Research design

This study is mainly based on the study of agriculture cooperatives operating in the Lalitpur district. This study tries to analyze the agriculture income of cooperative in Lalitpur district. The plan and strategy of the study were concerned in proper manner. Maximum effort was given to obtain answer to research questions validity and objectivity. The framework of the research formation had been designated to collect accurate information as far as possible and practicable. Analytical method have been used for the study. In this study qualitative as well as quantitative method are used to analyze the data and information. The field visit at the study area were done for 2 month. Only cooperative involved in agriculture production activities were selected for the study. collected data were processed by using different statistical tools like mean, median, mode etc. Similarly analysis were done by different table and graphs and empirical model was formulated by using regression analysis.

3.3 Sample Size and Sampling Procedure

In the study area, there were 109 agricultural cooperatives among them only 29 agricultural cooperatives were involved in the agriculture production activities. Therefore the study uses the census method of data collection and collects data from all 29 agriculture cooperatives that are involved in production activities.

3.4 Area of Study

This study was based on agriculture cooperatives of the Lalitpur district. Lalitpur District was a part of Bagmati province. Lalitpur covers an area of 385 km². Its population was 466,784 in the 2011 census. It is surrounded by Makwanpur, Bhaktapur, Kathmandu, and Kavre. The study area has been selected based on the researcher's interest to achieve the pre-determined objectives.

3.5 Method of Data Collection

The study was particularly based on primary data collection by using structured questionnaires from the manager of agriculture cooperatives in the Lalitpur district. Structured questionnaires are one of the effective data collection instruments. On the

basis of objectives and research questions appropriate questionnaires were prepared for recording the various aspects of agriculture cooperatives like members of cooperatives, share capital, deposit of cooperative, loan provided to cooperative members, years of operation, area of land used for agriculture production, amount of fertilizer used etc. Almost all the information that was required for the study such as demographic characteristics of board members, number of board members, qualifications of board members were also included in the questionnaires. The questionnaires also included the problems of agriculture cooperatives. However secondary data required for the study were also collected from book reviews, journals, and publications of the District Cooperative Office (DCO), Department of Cooperatives (DOC), National Cooperative Development Board (NCDB), National Cooperative Federation (NCF), and International Cooperative Association (ICA).

3.6 Methods of Data Analysis

Data or information collected from all 29 agriculture cooperatives was processed scientifically. Information was analyzed using computer package excel and R-programming. Analysis was done by different tables and graphs. Similarly, statistical analysis was employed to identify factors influencing the income of agriculture cooperatives.

3.7 Empirical Model

As in Marwa (N. W. Marwa, 2015), a multiple linear regression model is used to establish the variables that drive the factors affecting the agriculture income of agriculture cooperatives. Therefore the cobb-dobuglos production function followed by Mokgalabone,(2015) is used as the model for this study where agriculture revenue(Y) = $a + B_1AL_i + B_2F_i + B_4W_i + B_5P\&M_i + u_i$, where i denote agriculture revenue (Y) is regressed against area of land (AL), amount of fertilizer used (F), wage (W) and plant and machinery ($P\&M$) as independent variables. Before running the regression, the data collected are plotted on a graph to identify any outliers. If outliers are found, a smoothing technique is employed to smooth out the data. A test for multicollinearity is conducted using a correlation matrix to ensure the independent variables used do not have strong correlations among themselves. The heteroscedasticity test in this study was conducted by the Glejser method.

In the mean time to analyze the present status and to analyze the income and profit of agriculture cooperatives different information like total members of cooperatives, total number of share amount, training provided by cooperatives to its members, types of agriculture production, subsidies taken from government, agriculture land rent, last year revenue, different fixed cost, different variable cost, last year revenue, present status of deposit taken by cooperative and loan provided by cooperative, loan taken from different institutions and last five year profit of cooperatives were collected.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

4.1 Overview of Co-operatives in Nepal

The co-operative concept in the form of Guthi, Parma, Dhikuri, Dharmabhakari etc has been used from a very beginning in Nepalese societies. But, institutionally and formally government established the Department of Co-operative under the Ministry of Planning, Development, and Agriculture in 1953 A.D.

First modern cooperative movement started from Chitwan District as a part of flood relief and resettlement program. Thirteen credit co-operatives were established in 2013 B.S. This first Co-operative Societies Act was frequently brought under revision and was replaced by the Sajha Societies Act in 2041 B.S. After people's movement of 2046 B.S. the Sajha Societies Act was replaced again by the Cooperative Act 1992. The Department of Co-operative is now the body providing authority for registration and regulations of cooperatives in Nepal. The number of cooperatives is increasing, the number of people employed, the number of members of cooperatives is increasing and the diversity of cooperatives in terms of the working area is also getting diverse.

The total number of cooperatives according to Department of Cooperatives in 2073/74 is 34,512 where a total of 6,309,981 (3,213,514 female & 3,092,067 males) are members. There are 10,921 agriculture cooperatives where 1,098,865 members (614,716 females and 477,549 males) .

4.2 Socio-Economic and Demographic Characters of Cooperative Members

The socio-economic and demographic character of cooperative and its members considered division of board member by sex, division of board members by education, division of cooperative members by sex, years of operation, and share capital of the cooperative. All these variables may have an interpretation on the performance and present status of cooperatives, but also on the conformity to the government policy which aims at promoting and enhancing the role of the youth and females in the development of the country. Table 1 below presents the characteristics of a cooperative and its members.

Table4.1 socio-economic and demographic character of cooperative

Variable	Categorization	Frequency	percentage
Division of Board Members by sex	Male	140	58.33
	Female	100	41.67
	Total	240	100
Division of Board Members by Education	Below 10 years of schooling	25	10.42
	10 years of schooling	45	18.75
	12 years of schooling	79	32.92
	16 years of schooling	70	29.17
	More than 16 years of schooling	21	8.75
	Total	240	100
Division of cooperative members by Sex	Male	11298	56.62
	Female	8655	43.38
	Total	19953	100
Years of operation	0-5	0	0
	5-10	17	58.62
	10-15	11	37.93
	15-20	0	0
	20-25	1	3.45
	Total	29	100
Share capital	Less than 1 crore	20	68.96
	1 crore-2 crore	1	3.45
	2 crore-3 crore	4	13.79
	More than 3 crore	4	13.79
	Total	29	100

Source: Field survey, 2020

4.2.1 Division of Board Members by Sex

A board of directors is an elected group of individuals who meets at regular intervals to set policies for the development of the organization and supervise the activities of an organization. This section presents the current status of male and female members involved in cooperative as board members. The total number of board members in

surveyed cooperative is 240, among them 100 are female and 140 are male. The Constitution of the government of Nepal on gender emancipation states that in all sectors of socio, political and economic, females should at least be represented or present at 33%. Table 1 above shows that females represent 41.67% and males represent 58.33% in surveyed cooperatives.

4.2.2 Division of Board Members by Education

Education is a necessary instrument for cooperative performance. In this regard, Hussain, (2014) states the more people are educated, the more likely the performance and success of cooperative. Members of cooperative who have a certain (high) level of education may share experiences, monitor and control cooperative properties and cooperative finances more than uneducated members. Again, developing strategies for development and marketing might be easier for educated members than uneducated members.

The data in Table 1 shows that 25 (10.42%) out of 240 board members have below 10 years of schooling . 45 (18.75%) out of 240 board members have 10 years of schooling 79 (32.92%) out of 240 board members have 12 years of schooling 70 (29.17%) have 16 years of schooling and remaining 21(8.75%) have more than 16 years of schooling

4.2.3 Division of Cooperative Members by Sex

The government of Nepal wishes and encourages the presence of females in socio-economic activities, especially in income-generating activities through the involvement in cooperative and other different socio-economic sectors. The data in Table 1 shows that in 25 cooperatives taken as a sample the total members of the cooperative are 19953 among them 43.37% are female and 56.63 percent are male.

4.2.4 Years of Operation

Years of operation show the experience. It is assumed that the cooperative that has more years of operation could perform in a proper and functioning way than the cooperative that has fewer years of operation. Table 1 above shows the years of operation of 29 agriculture cooperative. The number of cooperatives having experience of more than 5 years and less than 10 years is 17(58.62%). In the meantime cooperative operating for more than 10 years and less than 15 years is 11

which is 37.93%. And the cooperative having experience of more than 20 years is 1 which is 3.45%.

4.2.5 Share Capital

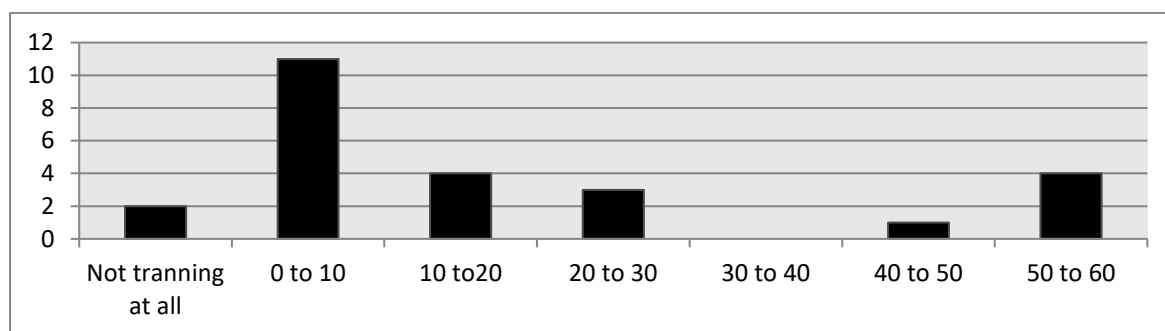
Share capital is the share amount of money collected by a cooperative by selling its share. According to cooperatives act, 2048 an association or society may collect share capital by selling its shares to those persons who are under its jurisdiction and are eligible to become its members.

The above table shows the present status of share capital in all 29 cooperatives. 20 cooperatives have a share capital of less than 1crore which is 68.96 % , 1 cooperative have a share capital of more than 1 crore but less than 2crore which is 3.45%. Similarly 4 cooperative have a share capital of more than 2crores but less than 3 crore which is 13.79%. and 4 cooperatives have a share capital of more than 3 crore which is 13.79%. Among the cooperative, HamroKrishi Bikash Multipurpose Cooperative limited hasa share capital of more than 10 crores.

4.3 Training Provided by Cooperative

It is the responsibility of the cooperative to build the capacities of its members through training. Cooperative must identify the training needs of its members and train them to fillin the gaps. The researcher assumed that trained cooperative members can perform better than untrained cooperative members. Trained members can think critically and can change things when they are not well done. However, on this point, one of the interviewees said “ *I do agree that training is organized for members, but the majority do not attend those training and some of the training do not match with their needs and expectations*”.

Fig 4.1 Distribution of cooperative providing training to its members each year



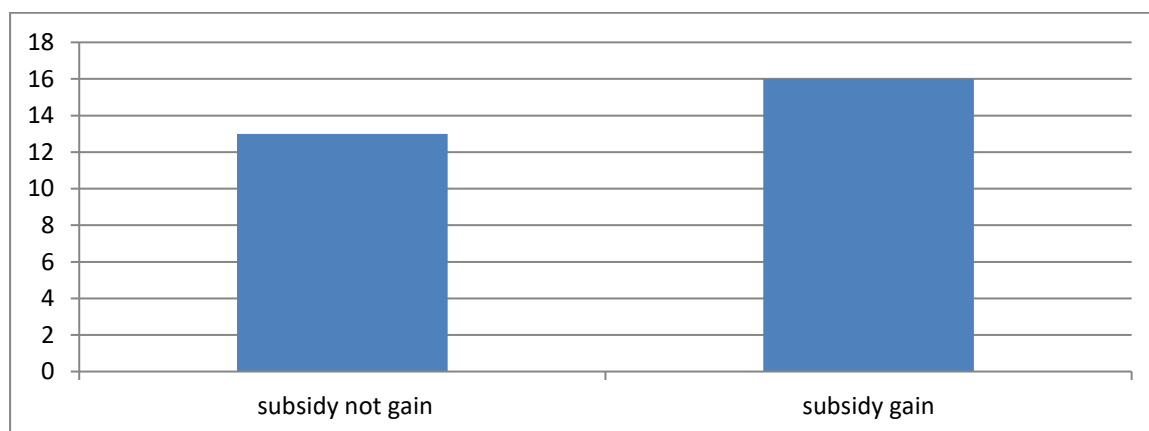
Source: Field survey, 2020

Figure 1 shows that among 25 cooperatives 23 cooperatives have provided training in different sectors of cooperative to their members every year with the help of the National cooperative Federation and National cooperative development Board. 11 cooperatives have provided training to less than 10 members this year. Similarly, 4 cooperatives have provided training to more than 10 members but less than 20 members. 3 cooperative have provided training to more than 20 members but less than 30 members and 1 cooperative have provided training to more than 40 members but less than 50 members. In the meantime, only 4 cooperatives have provided training to more than 50 members but less than 60 members. Both Bishnu Devi agriculture cooperative limited and Gramin agriculture cooperative limited have provided training to 60 members this year.

4.4 Distribution of Cooperatives by Subsidy Gained

Government of Nepal and different other social organizations are providing different subsidies and grants to the agriculture cooperative for the development of agriculture sectors. It is believed that subsidy plays important role in the improvement of agriculture sectors and also helps to reduce the cost of production in agriculture sectors. However, some respondent believes that the subsidy provided by the government are not in proper hand and it is provided to that institution that is close to government bodies.

Fig 4.2 Distribution of cooperative by subsidy obtained



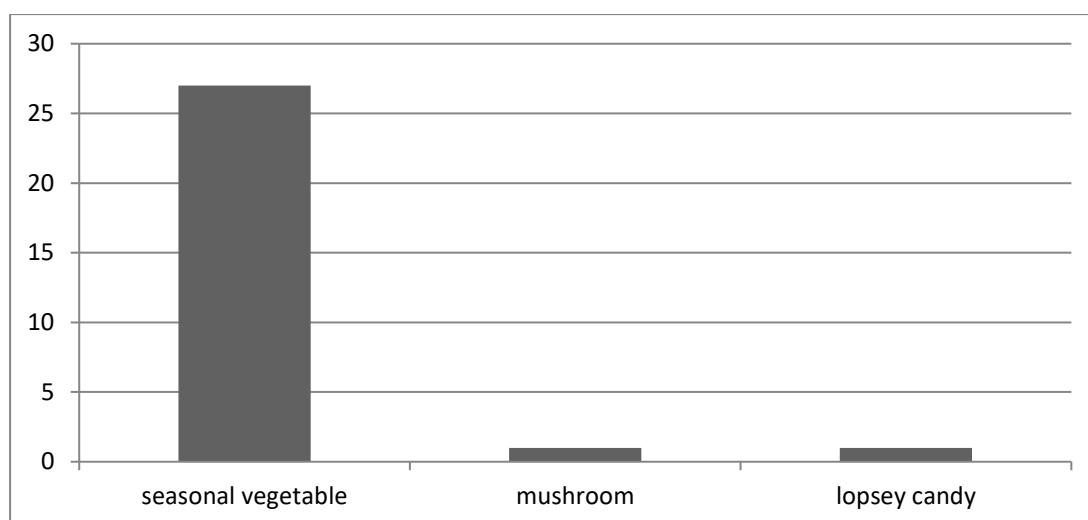
Source: Field survey, 2020

Figure 5.2 shows that among 29 cooperatives 13 cooperatives have't gained any kind of subsidy or grand. Meanwhile, 16 cooperatives have gained. The total amount of subsidy obtain by cooperatives from different sector of government and agriculture funding international organization is almost 1 crore. The highest subsidy gained by prativa multipurpose cooperative limited which is of 43 lakh .

4.5 Classification of Cooperative by Agriculture Production

All cooperatives were involved in agriculture production activities. where 27 cooperative were involved in the production of seasonal vegetables, 1 cooperative was involved in mushroom production and 1 cooperative was involved in the production of lopsy candy. It is shown in the bargraph below. The result also shows that among 29 cooperatives 9 cooperatives are also involved in the animal husbandry business.

Fig 4.3 Distribution of cooperative by agriculture production



Source: Field survey, 2020

4.6 Distribution of cooperative by Resources Gained

This section tries to show whether or not the cooperative has gained any resources in production as well as in the management of the cooperative. It includes human resources as well as non-human resources. If a board member or other members of the cooperative areserving in the cooperative free of cost it is human resources. In the meantime, if the cooperative is gaining free electricity from its members, rent-free from its member's houses, free manure for the product then it will be included as non-

human resources. It can also be seen as the opportunity cost foregone by cooperative members while involved in cooperative.

Table 4.2 Distribution of Cooperative by Resource Gained.

Agriculture cooperative	No of cooperative	Amount
Use its resources	15	1549000
Agriculture cooperative not use its own resources	14	0
Total	29	1549000

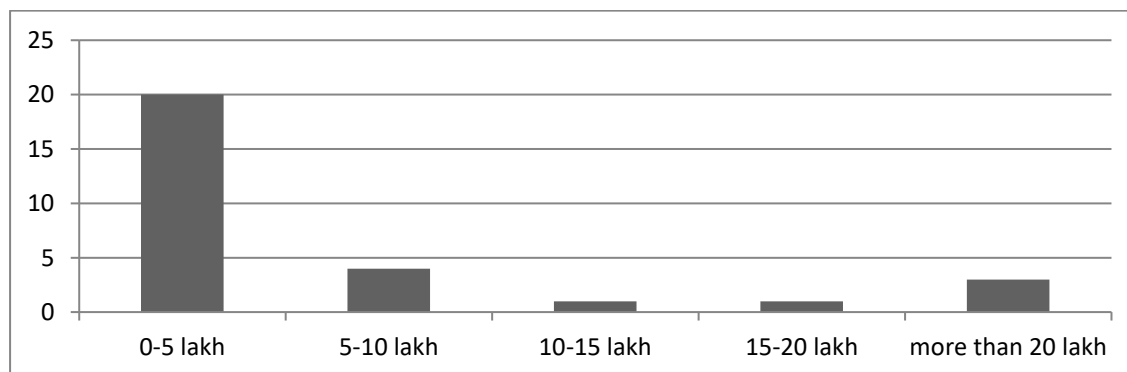
Source: Field survey, 2020

Table 2 above shows among 29 cooperative 15 respondents said that their cooperatives have utilized their member's skills ability and member's property as resources in production and management of cooperative without a cost. Whose monetary value could be Rs 1549000. However, 10 respondents told that they have not utilized their member's skills ability and any types of resources free of cost.

4.7 Distribution of Cooperative by Investment on Capital Assets.

The amount of money invested in the physical assets is capital assets. Capital assets are used by the company in the generation of revenue. In this study, an investment made by cooperative in plant and machinery, furniture, computers, and another instrument which helps in generation of revenue is taken as an investment on capital assets of cooperative.

Fig 4.4 Distribution of cooperative by investment on capital assets



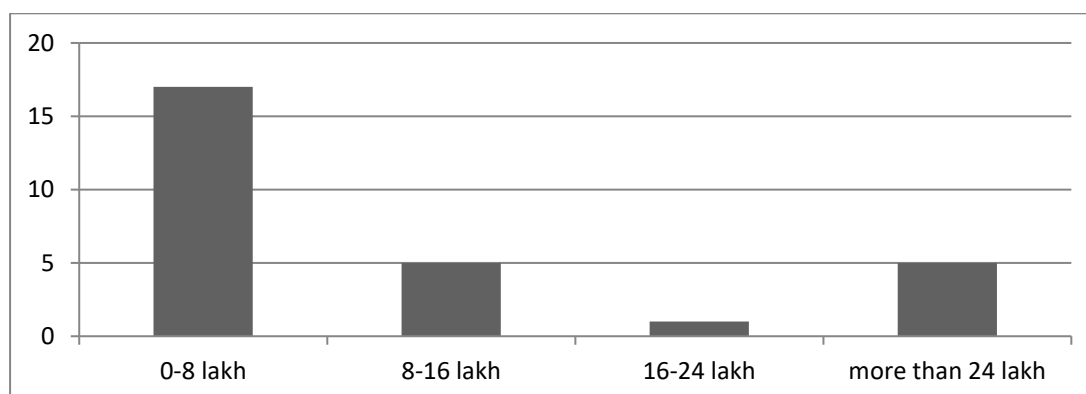
Source: Field survey, 2020

The above figure shows that among 29 cooperatives 20 cooperatives have invested in less than 5 lakh capital assets, 5 cooperatives have made investments of more than 5 lakh but less than 10 lakh. 1 cooperative have made investment between 10 to 15 lakh ,1 cooperative has made investments between 15 to 20 lakh and 2 cooperatives have made an investment of more than 20 lakh on capital assets. The highest investment on capital assets is made by Krishi Bikash multipurpose cooperative limited

4.8 Distribution of Cooperative by Expenditure on Human Capital

Human capital is only one active factor in the economy and it plays important role in the production, performance, and management of firms or organizations. In this research, the researcher tries to find the expenditure made by cooperatives on human capital. Expenditure on human capital includes wages and salaries of staff, training expenditure, and allowances provided to the board of directors.

Fig.4.5 Distribution of cooperative by expenditure on human capital



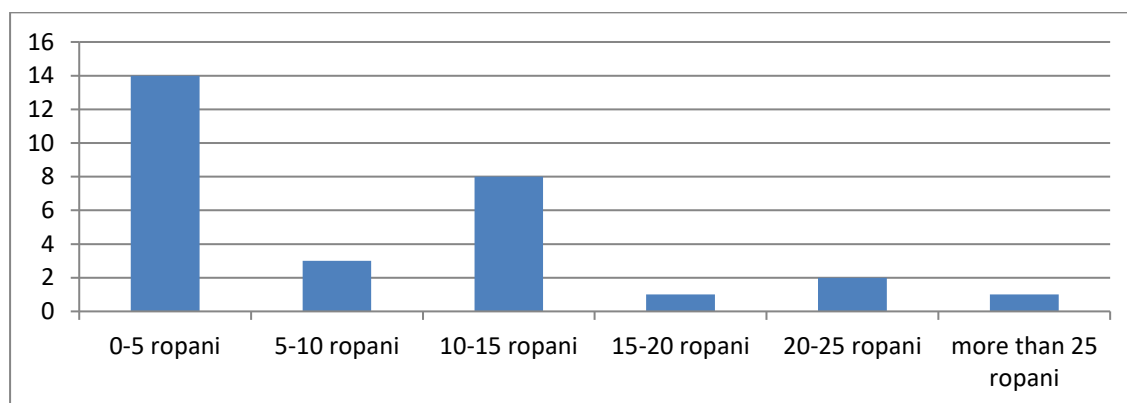
Source: Field survey, 2020

The figure shows the expenditure made by cooperatives on human capital this year. Among 29 cooperatives, 17 cooperatives have made expenditure less than 8 lakh in human capital. Similarly, 4 cooperatives made expenditure more than 8 lakh but less than 16 lakh. In the same way, 1 cooperatives have made the expenditure more than 16 lakh but less than 24 lakh and 5 cooperatives have made the expenditure more than 24 lakh. The highest expenditure on human capital is done by Krishi Bikash multipurpose cooperative limited which is more than 85 lakh.

4.9 Distribution of Cooperative by area of land used for agriculture

All 29 cooperative were involved in agriculture production. For the production agriculture cooperative have taken land on rent. The area of land used by cooperative for agriculture production is shown in below figure.

Fig:- 4.6 Distribution of Cooperative by area of land



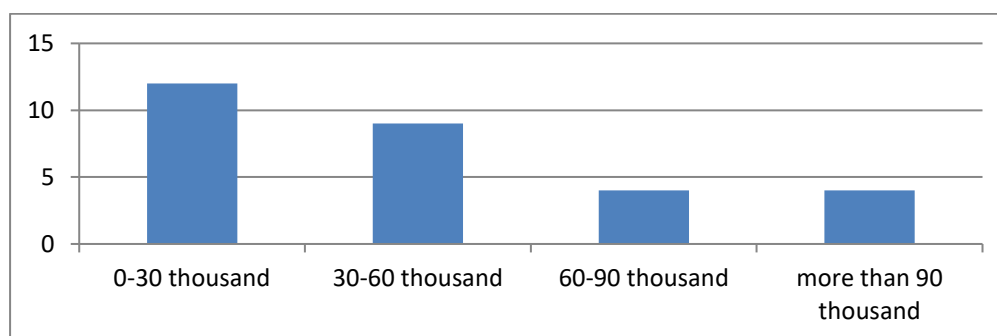
Source: Field survey, 2020

The above figure shows that among 29 cooperatives 14 cooperatives have less than 5 ropani of land for farming. Meanwhile, 3 cooperative less than 10 ropani of land, 8 cooperative have less than 15 ropani of land, 1 cooperative have less than 25 ropani land and 1 cooperative have more than 25 ropani of land.

4.10 Distribution of Cooperative by Cost on Fertilizer

The expenditure made on the cost for the purchases of both organic and chemical fertilizer is included in this sections. The below graph shows the total amount of fertilizer used by different cooperatives.

Fig:- 4.7 Distribution of Cooperative by Cost on Fertilizer



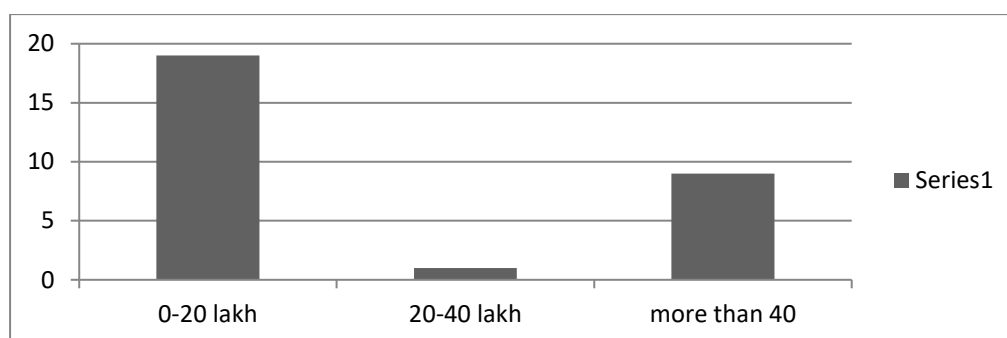
Source: Field survey, 2020

The above figure shows that among 29 cooperatives 12 cooperatives spend less than 30 thousand on fertilizer, 9 cooperative spend less than 60 thousand on fertilizer, 4 cooperative spend less than 90 thousand and 4 cooperative spend more than 90 thousand on fertilizer. The spending of fertilizer used to depend on area of land.

4.11 Distribution of Cooperative by Revenue

Revenue is the source of income gained by firms or organizations. The sources of revenue in the case of agriculture cooperative are interested to obtain from the loan amount, sales of agriculture production, fines and fees in loan, loan service charge, sales of chemical fertilizer and return from other investment if cooperative have made any.

Fig 4.8 Distribution of cooperative by revenue generation



Source: Field survey, 2020

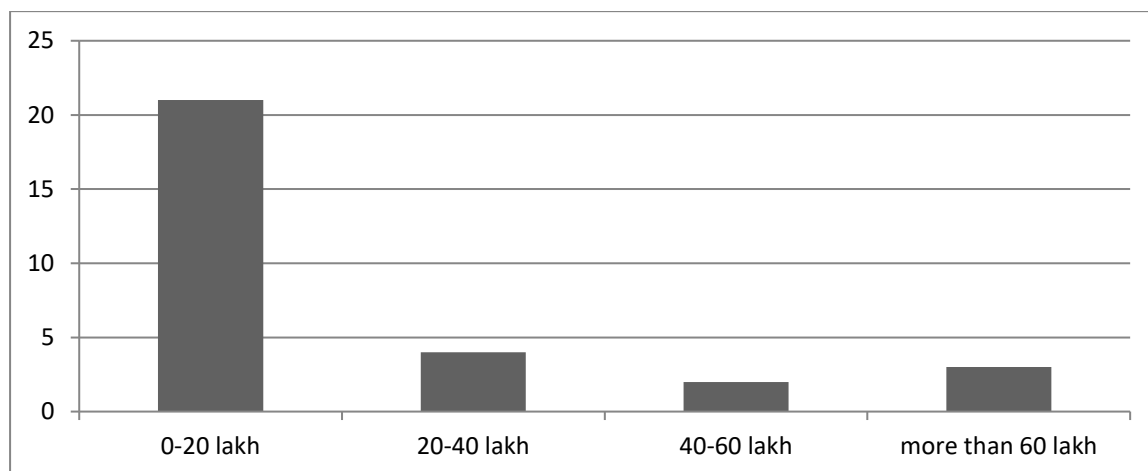
The above figure shows that among 29 cooperatives 13 cooperatives earn less than 20 lakh revenue last year. Meanwhile, 1 cooperative was able to earn more than 20 lakh but less than 40 lakh revenue. In the meantime 9 cooperative earn more than 40 lakh revenue last year. The highest revenue is generated by Krishi Bikash Multipurpose Cooperative limited which is more than 9 crore.

4.12 Classification of Cooperative by Profit Size

Every financial institution has the objective of earning profit in each fiscal year to distribute some dividends to the shareholders. This profit is conducive to the further growth of such institutions. Cooperatives cannot run efficiently if there is no profit. Profit is the financial benefit gained when the revenue generated from a business

activity exceeds the expenses, costs, and taxes. Profit is one of the strong variables to show the present status of any firm. Higher profit shows the strong position of firms while loss or lower profit shows the weak position of any firm. Dividends of any organization are also distributed from the profit.

Fig.4.9 Classification of cooperative by profit



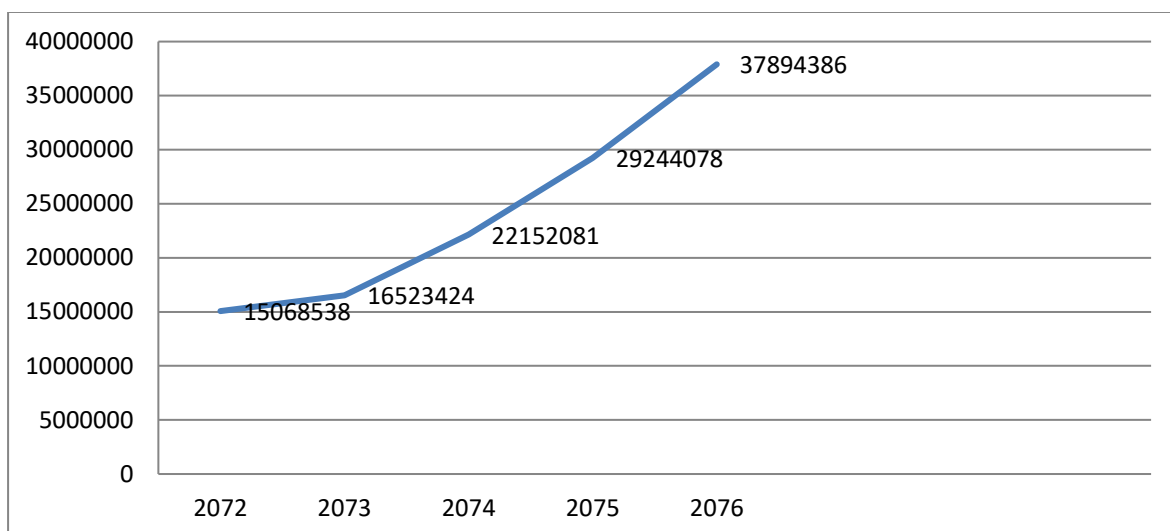
Source: Field survey, 2020

The above figure shows the classification of all 29 cooperatives by profit. Among 29 cooperatives 21 cooperatives have earned profit of less than 20 lakh. 4 cooperative have earned profit of less than 4 lakh. 2 cooperative have earn less than 60 lakh and 3 cooperative have become able to earn more than 60 lakh.. However,2 cooperatives were able to obtain a profit of more than 25 lakh. The highest profit is made by Krishi Bikash Multipurpose Cooperative Limited which is 1.5 crore.

4.12.1 Average Profit Trend of Cooperatives

It was seem's that the average profit of agriculture cooperatives for the last five years is increasing each year. The average profit of a cooperative in 2072 was 15,068,538 and 16,523,424 in 2073. It becomes 22,152,081 in 2074 and 29,244,078 in 2075and it increases to 37,894,386 in 2076 which is shown in below table.

Fig 4.10 Average Profit trend from 2072 to 2076



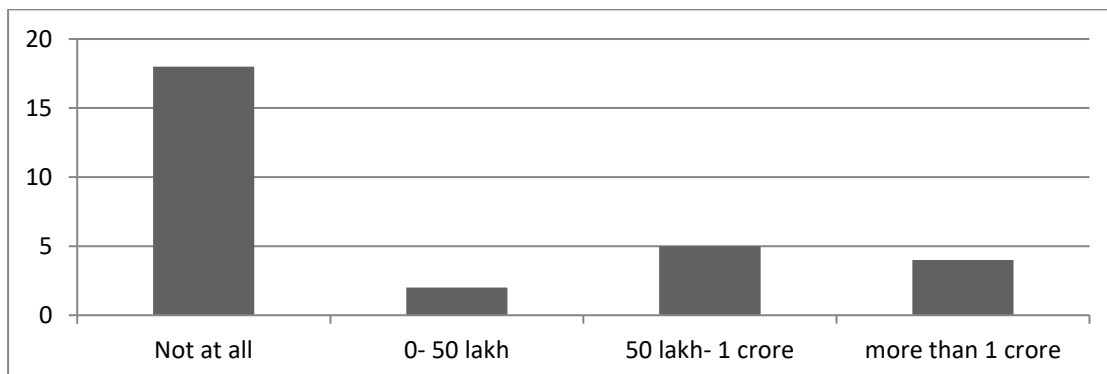
Source: Field survey, 2020

The above trend diagram shows the average profit of agriculture cooperatives. The trend line shows that the average profit is increasing each year from 2072 to 2076.

4.13 Distribution of Cooperative by Loan Obtained

Different financial institutions like Sana Kishan Development Bank and Cooperative Development Bank and social organizations like youth and small entrepreneur self-employment funds are providing loans to the cooperative. Cooperative use this money to provide loan to its members at a lower interest rate. The main objectives of providing this loan are to reduce the poverty of its members through engaging in productive employment activities.

Fig.4.11 Distribution of cooperative by loan obtain



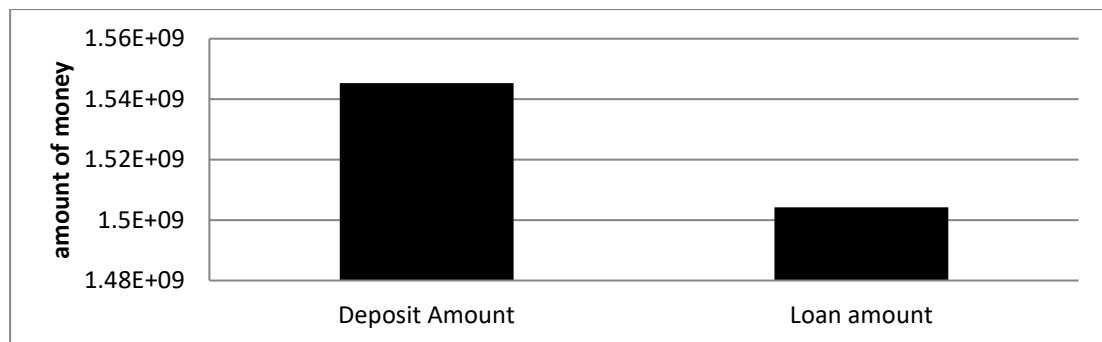
Source: Field survey, 2020

Among 29 cooperatives 18 cooperatives haven't taken any loan from other financial institutions, 2 cooperative have taken loan of less than 50 lakh, 5 cooperative have taken loan of more than 50 lakh but less than 1 crore and 4 cooperative have taken loan of more than 1 crore.

4.14 Present Status of Deposit and Loan

Deposit collection and loan withdrew are important sources to generate income in the cooperative. Among the respondent of 25 cooperatives, 22 replied that the main source of revenue in cooperative is the interest gained from the loan amount. Cooperative will only be capable to provide the loan to its members if it has an adequate amount of deposit. Therefore, the quantity amount of deposits and loans play important roles to increase the financial performance of the cooperative.

Fig.4.12 Present status of loan and deposit of cooperative



Source: Field survey, 2020

The above figure shows the present status of the loan and deposit of all 25 cooperatives. The total deposit of all 29 cooperatives is Rs1,54,53,64,718 and the loan is 1,50,42,23,962.

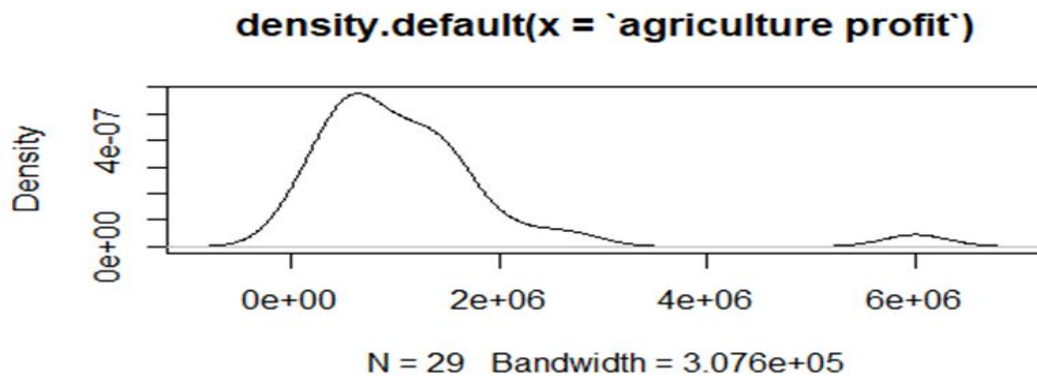
4.15 Test of Normality of the Dependent Variable

The normality test had been performed using R-programming. There are different methods for testing the normality of the variables, among them we use a graphical method and statistical method for testing the normality of the dependent variable. In the graphical method, we have used density plot and q-q plot. Whereas, in the statistical method, the Shapiro-Wilk test was selected for checking the normality of the data.

4.15.1 Kernel Density Plots

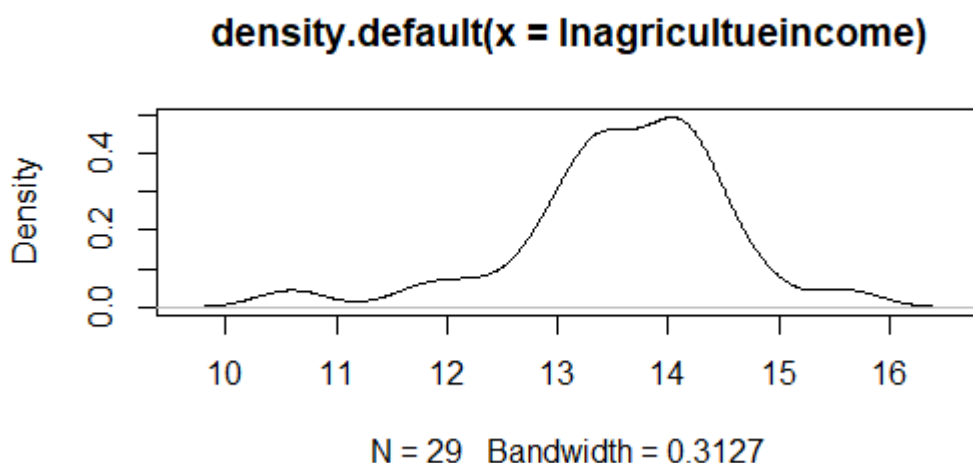
Kernel density plots are usually a much more effective way to view the distribution of a variable. If the data plotted in the graph forms are of bell shape curve then the data is known as normally distributed. Otherwise, it is not normally distributed.

Fig 4.13 Kernel density plot of agriculture Income



The above figure shows that the data are not in bell shape. Therefore kernel density plot shows that the data of agriculture income are not normally distributed so, we use the natural log and see the kernel density plot.

Fig 4.14 kernel density plot of the log of agriculture income

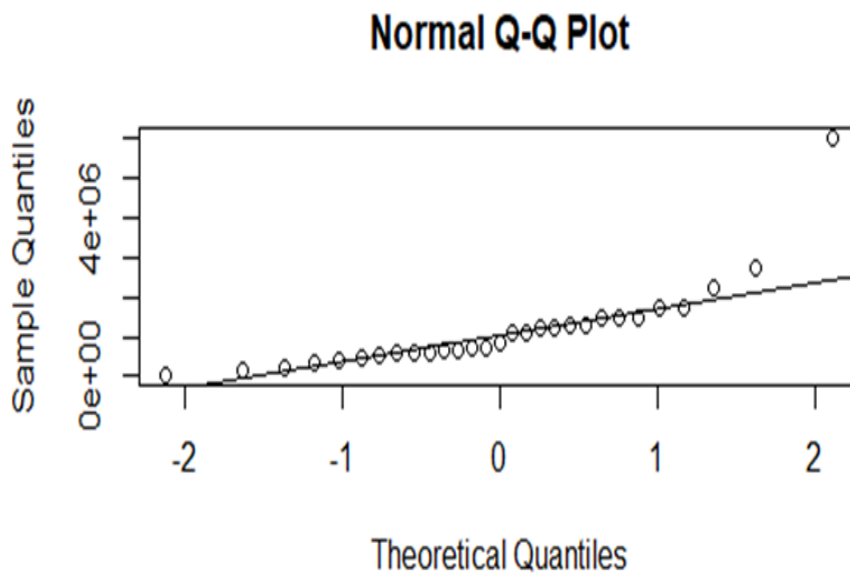


The above figure shows that the data are plotted in bell shape. This shows that the data of log of agriculture income of cooperative is normally distributed.

4.15.2 Quantile-Quantile (Q-Q) plot

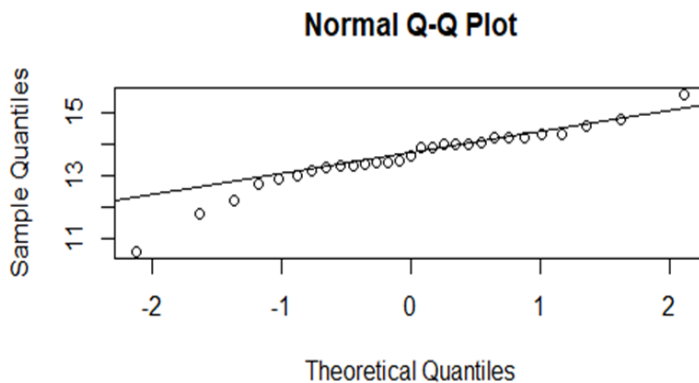
A normal probability plot, or more specifically a quantile-quantile (Q-Q) plot, shows the distribution of the data against the expected normal distribution. For normally distributed data, observations should lie approximately on a straight line. If the data is non-normal, the points form a curve that deviates markedly from a straight line. Possible outliers are points at the ends of the line, distance from the bulk of the observations.

Fig 4.15 Q-Q plot of Income of cooperative



The above figure shows that the point doesn't lie in the straight line so the data are not in the normal distribution. Therefore we use the natural log of agriculture income and see q-q plot for the normal distribution.

Fig 4.16 Q-Q plot of the log of income of cooperative



The result of Q-Q plot after taking log shows that the data are more likely near the line therefore the data shows that log of income is normally distributed.

4.15.3 Shapiro-Wilk Test

This test shows that the data should be significant to reject that the dependent variable is normally distributed. In another word, the value under the Shapiro-Wilk test of normality should be greater than 0.05 to be normal.

Table 4.3 Shapiro-Wilk Normality Test of agriculture Income

data: Income	
W = 0.69694	p-value = 1.0902e-06

The probability value of the Shapiro-Wilk test clearly shows that the dependent variable income is not normally distributed. Therefore we use a natural Log to see whether or not the log of income shows normality of data.

Table 4.4 Shapiro-Wilk Normality Test of log(Income)

data: log(Income)	
W = 0.92996	p-value = 0.05487

The log of dependent variable income shows that p-value or significance value of Shapiro-wilk test is greater than 0.05 therefore from the result of kernel density plot of log of income, Q-Q plot of log of income of cooperative and Shapiro-wilk normality

test of log of income we can conclude that log of agriculture income is normally distributed. So, while incorporating the data of agriculture income of cooperative in the regression, it was transformed using natural log.

4.16 Diagnostic Test of Regression Analysis

4.16.a Test of Multicollinearity

Multicollinearity test is done to determine whether or not perfect correlation between independent variables. It is expected that there is no perfect correlation between independent variables (no multicollinearity). The multicollinearity test results are presented in Table 8.

Table 4.5 Variance inflation factor (VIF Values)

Factors	VIF
log(area of land)	3.629639
log(fertilizer)	2.223793
log(wage)	4.696814
log(plant and machinery)	1.646197

variance inflation factor (VFI) help to explore presence of multicollinearity. Existence VIF value greater or equal to 10 reveals presence of multicollinearity (Pallant, 2001). For this study, VIF of all dependent variable log of share capital, log of years of experience, log of investment on capital assets log of fertilizer used and log of area of land are as indicated in Table . Table 2 shows that all VIF values for all factors are under 10, which demonstrated that the data set is free from multi-collinearity problems in the survey data.

4.16.b Test of Heteroscedasticity

Test for Heteroscedasticity is performed to determine whether the error variance of each independent variable in the regression model is constant or not. It is hoped that the variance error of each independent variable is constant (no heteroscedasticity). The heteroscedasticity test in this study was conducted by Breusch-pagan test.

Table 4.6 Results of Heteroscedasticity Test

studentizedBreusch-Pagan test		
data: result of regression		
Bp=3.4422	df=4	p-value=0.4867

As shown in Table 9, the probability values of the variables are greater than significant level at 0.05. Therefore, it could be concluded that there is no heteroscedastisity problem on this regression model.

4.17 Regression Analysis

Regression analysis is used to analyze the associations between a set of independent variables and a single dependent variable. The concern of this model is whether or not the independent variables have an influence on dependent variables as hypothesized. For this purpose, multiple regression analyses (MRA) were conducted to analyze the direct relationship between share capitals, years of experience, total fixed assets, fertilizer used and area of land on income of agriculture cooperative.

Based on multiple regression analysis, this study found that all five variables share capital, years of experiences, fixed assets, fertilizer used and area of land have positive impacts on the co-operatives performance.

Table 4.7 Regression Analysis

Coefficients:	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	4.27499	1.82294	2.345	0.0276*
log(AL)	0.62037	0.12523	2.086	0.0478*
log(F)	0.30245	0.09315	1.285	0.2112
log(W)	0.18924	0.21182	2.079	0.0485* .
lnP&M	0.04455	0.06841	1.630	0.1162

Residual standard error: 0.4944 on 24 degrees of freedom
Multiple R-squared: 0.8354, Adjusted R-squared: 0.808
F-statistic: 30.45 on 4 and 24 DF, p-value: 4.362e-09

Sources: data were process using R-programming

The findings of this study showed 83.54 percent of the variation in the dependent variable, which was the income of cooperative, was explained by the variation in the independent variable which includes area of land(AL), fertilizer(F), wage(W) and Plant and machinery(P&M). However, remaining 16.46 percent of the variations was explained by other variables which are not included in the study. The overall model was statistically significant at 5 percent significance level.

Based on the table 4.7, intercept, log(area of land) and log(wage) are found statistically significant at 5 % whereas log(fertilizer) and log(plant and machinery) are not statistically significant at 5% level of significant. The estimate value of intercept ,log(AL) and Log(F) were 4.275, 0.62 ,and0.19 respectively. The value of 0.62 shows that the increase in land by 1 unit will increase the agriculture income by Rs.(0.62) and the estimate of wage 0.19 shows that the increase in wage rate by 1 rupees will increase the agriculture income by Rs.(0.19)

CHAPTER V

SUMMARY FINDINGS AND CONCLUSIONS

In this chapter the summary of the study is provided including major findings and conclusions. This sections try to show what were the findings and conclusion of the study.

5.1 Summary

With respect to the objectives of the study to determining the factors affecting the income of the cooperative and to see the present status of cooperative in lalitpur district a comprehensive questionnaire was build and surveyed in 29 agriculture cooperatives in Lalitpur district. Data were collected by interviewing the head of agriculture cooperative. Questionnaire includes personal information of respondent, present status of share, deposit, loan of cooperative, present status of training of cooperative, expenditure on human capital, cost incurred in capital assets, revenue, profit, cost in cooperative, present status of agriculture production, area of land, government subsidy and loan provided by different social institution who works under the supervision of government etc.

After processing the data, the current situation of agriculture cooperative in lalitpur district was revealed and to find the factors affecting the agriculture income of cooperative four variables area of land, wage, fertilizer and plant & machinery were taken as explanatory variables. Among the area of land and wage were found statistically significant. Meanwhile fertilizer and plant & machinery was insignificant. In addition present status of agriculture cooperative like education level of board members, number of male and female involvement, present status of training, present status of profit were also seen.

5.2 Major Findings of the Study

The major Findings of the study are as follows:

- i. This study shows that in all 29 cooperatives there are 240 board members in which 100 are female and 140 are male. In the meantime 5 cooperative are operated by only female members and 2 cooperative doesn't have any female members. All other 18 cooperative have both male and female members in their board.

- ii. Among the 29 cooperative 17 cooperative have more than 5 years but less than 10 years of experience similarly 11 cooperative have more than 10 years but less than 15 years of experience and only 1 cooperative have more than 20 years of experience.
- iii. 20 cooperatives have a share capital of less than 1crore, 1 cooperative have a share capital of more than 1 crore but less than 2crore , 4 cooperative have a share capital of more than 2crores but less than 3 crore and 4 cooperatives have a share capital of more than 3 crore .
- iv. Among 29 cooperative 15 respondents said that their cooperatives have utilizing their member's skills ability and member's property as resources in production and management of cooperative without a cost. Whose monetary value could be 1549000 rupees. However, 14 respondents told that they have not utilized their member's skills ability and any types of resources free of cost.
- v. The average investment made by cooperative on capital assets is Rs 1002440 and median is Rs 1322440. In the meantime average expenditure made by cooperative on human capital is Rs 906840 and its median is 1293840.
- vi. Among 29 cooperatives 14 cooperatives have less than 5 ropani of land for farming . Meanwhile, 3 cooperative less than 10 ropani of land, 8 cooperative have less than 15 ropani of land ,1 cooperative have less than 25 ropani land and 1 cooperative have more than 25 ropani of land.
- vii. Among 29 cooperatives 12 cooperatives spend less than 30 thousand on fertilizer, 9 cooperative sepdn less than 60 thousand on fertilizer, 4 cooperative spend less than 90 thousand and 4 cooperative spend more than 90 thousand on fertilizer. The spending of fertilizer used to depend on area of land.
- viii. The multiple regression result shows that variables like area of land and wage are statistically significance below 5% level of satisfaction and the estimates 0.62 shows that if area of land increase by 1% than agriculture income increase by 0.62% and estimates of wage 0.19 shows that increase in wage by 1% will increase agriculture income by 0.19%.
- ix. The findings of this study showed 83.6 percent of the variation in the dependent variable, could be explained by the variation in the independent variable which consisted of share capital, investment on capital assets, expenditure on human capital and years of experience while the remaining 8 percent of the variations could be explained by other variables that were not included in the study. F-test supported that the overall model was statistically significant at 5 percent significance level

5.3 Conclusion

From the objectives of the study, it can be concluded that share capital have a positive impact on the income level of agriculture cooperative. Also, expenditure on human capital and investment on capital assets affect income level of agriculture cooperative positively. In the meantime years of experience on the other hand doesn't have any effect on the income level of agriculture cooperative. Furthermore study shows a huge difference between the agriculture cooperative operating with higher amount of shares capital and higher area of land. Number of agriculture cooperative operating with higher amount of share capital, large number of members and higher area of land for agriculture become able to function in most significance way than agriculture cooperative with lower amount of capital, members and higher area of land for agriculture. Therefore, the following recommendation can be made based on the study for the improvement of agriculture cooperatives.

1. Share capital play vital role in the performance of agriculture cooperative. So amount of share capital should be increases to increase the performance of agriculture cooperative.
2. Increase in area of land will increase the agriculture income of agriculture cooperatives
3. Education level and experience of board members is also one of the important factors for the management and performance of cooperatives so it is recommended to create a certain bar in selecting the board members.

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Appendix A

Set of questionnaire

For the factors influencing the profitability of agriculture cooperatives

Date of interview

Name of interviewer

I would like to ask you some questions for the study of factors influencing the profitability of agriculture cooperatives in Lalitpur area as a research work of the Masters of Arts of Economics under Tribhuvan University. The objectives of the research work are to find out the factors influencing the profit. Please do answer these questions honestly and help me to conduct this study successfully. Thank you.

Deepak Ghimire
Patan multiple campus,
Patan Dhoka Lalitpur
Tribhuvan University

Personal information

Name of the respondent:

Age:years

Establishment of cooperatives

Number of board of director

Qualification of board of directors

Qualifications	Number
Below SLC	
SLC	
+2	
Bachelor	
Master and Mphil	
PHD	

Gender:

- (a) Male
- (b) Female

Information regarding the profitability of cooperatives

1. How many members are involved in these cooperatives?
 male Femaletotal

2. What are the different types of activities done by these cooperatives?

- A. Saving and credit
- B. Agriculture production
- C. Investment on agriculture market
- D. Animal husbandry
- E. Selling of agriculture products
- F. others

3. What is the cost of per unit share and what is the no. of shares owned?

Cost per unit share	
No. of shares owned	

4. What is the total amount of Investment, in these cooperatives?

.....

5. Is this agriculture cooperative providing training to its member's?

A. yes

B. no

6. How many members have taken training of agriculture production?

..... MaleFemaleTotal

7. Which are the types of agriculture product produced by agriculture cooperative this days?

a.....

b.....

c.....

d.....

8. Amount of fertilizer used:

Type of fertilizer	Kg per ropani	Cost (Rs)
Organic		
Inorganic		

9. Have this cooperative taken subsidy from government in 7075 B.S.?

a. Yes (Amount in Rs:, Purpose.....)

b. No

10. Is this organization using its own resources in production?

a. Yes (how much amount you could earn by using those resources in alternative use? Rs.....)

b. No

11. What is the profit of agriculture cooperatives of previous years? (Five year;s profit)

- 2071 Rs
- 2072 Rs.....
- 2073 Rs.....
- 2074 Rs.....
- 2075 Rs.....

12. Is the agriculture land belonging to agriculture cooperative?

- a) Yes
- b) No

13. Last year's TVC:

seeds	fertilizer	wages	pesticides	carriage	herbicides	electricity		

14. Last years' TFC:

Plant and Machinery	land	building	rent	permanent staffs salaries				

15. What is the last year revenue of these cooperatives?

Rs

16. What is the last year amount of tax paid by this cooperaties to the government?

RS.....

17. How does this cooperative manage to sales their product?

- a) Directly to the consumer
- b) To the middle man
- c) To the sales man

18. Is this cooperative has also being involved in animal husbandary?

- a) Yes (if yes 18 and 19)

b) No (if no 20)

19. What is the cost incurred in animal husbandry per month?

.....

20. What is the revenue obtained from animal husbandry per month?

.....

21. Is this cooperative have taken loan from Sana Kishan Development Bank or any other financial institution?

a) Yes Amount

b) No

22. What is the amount of deposit collect from its members?

.....

23. What is the amount of loan provided to its members?

.....

24. What are the main sources of revenue of these cooperatives?

.....

25. Are you experience any problem in your business? If yes please mention

Yes / No

.....

.....

.....

.....

26. Do you want to increase your business by using modern technology?

1. yes

2. No

27. Would you like to suggest to the government for the improvement in agriculture cooperative?

.....

.....

.....

.....

Thank you for your kind cooperation to my research work.