

CHAPTER - ONE

INTRODUCTION

1.1 Background

Accounting is the systematic development and analysis of information about the economic affairs of an organization. The information may be used in a number of ways: by the organization's managers to help them plan & control the organization's operation; by owners, and legislative or regulatory bodies to help them appraise organization's performance and make decision as to its future; by owners, lenders, suppliers, employees and others to help them decide how much time or money to devote to the organization; by governmental bodies to determine how much tax the organization must pay; and occasionally by customer to determined the price to be paid when contracts calls for cost-based payments. Accounting is the process of identifying, measuring, and communicating economic information to permit informed judgments and decisions by user of the information. Accounting is not only to record the transaction in systematic manner and to analyze & interprets them, but also communicates the information and data to user who have to make decisions or form judgments. Accounting can be supposed as a vehicle to communicate the essential data and information to various users.

Accounting can be broadly classified into following three types:

i) Financial Accounting

ii) Cost Accounting

iii) Management Accounting

i) Financial Accounting: Financial Accounting is related with financial transactions. So it records the financial transitions and helps to find out the profitability of the concern. It also provides information about the financial position of an organization. With these objectives, it prepares Profit and Loss account or Income Statement and Balance Sheet. Before preparing income statement and balance sheet, it also records business transactions taking place during the accounting period. For this purpose, it uses journals and ledgers.

ii) Cost Accounting: There are sustaining limitations of Financial Accounting. To overcome the limitation of financial accounting, cost accounting has been developed. Cost accounting is branch of accounting which deals with the cost. It has been designed to determine and accumulate the cost of certain activities to report cost information to management.

iii) Management Accounting: Management accounting is the application of the appropriate techniques and concepts in processing historical and projected economic data of an assist management in establishing plans for reasonable economic objectives in the making of rational decision with a view towards those objectives. It is concerned with reframing the accounting information to make it useful for the management. It also clearly indicates that any system of accounting which assists management in carrying out its functions more efficiently may be termed as management accounting.

American accounting association defines accounting as **The process of identifying, measuring and communicating economic information to permit informed judgments and decisions by users of the information."**

Co-operative society is a business organization. Co-operative organizations have two entities such as business enterprise and social institution. Co-operative organizations have to compete with private as well as public sector organizations. The prime objective of co-operative organizations is to serve the members to their best ability and responsibility. Although, it is a business enterprise, the force that governs its activities is not maximization of profit but the maximization of service to members. Co-operative organizations cannot go beyond the Co-operative values and expansion. At the same time profit is also necessary for its existence, growth and expansion. Profit is also taken to be one of the criteria for measuring its success. It should ensure its financial viability. So Co-operative organizations have to satisfy twin objectives i.e. service as well as profit. The conference of International Co-operative Society defined that: "A Co-operative is an autonomous economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise."

1.2 Statement of the Problem

In the co-operative organization sector because of lack of proper and update accounting training, lack of awareness concerning the accounting tools and techniques there are numerous financial limitation which is major problem faced by them. This study focus on the problem faces by co-operative organization in the respective area. The common problems which have been identified are as follows:

1. What is the existing accounting practice followed by co-operative organizations in Chitwan district?
2. What is the major problem faced by co-operative organizations?
3. What is the regulatory provision regarding accounting practices in co-operative organization?

Success is not the matter of chance. For getting long term success each and every organization need to prepare proper planning and decision making. For this purpose require proper financial information and that will provide by proper accounting system.

1.3 Objectives of the Study

The main objectives of this study are to identify the prevailing accounting practices and accounting problems faced by the co-operative organization in Nepal. This study also aims to suggest appropriate accounting model to those organization. Besides that, other objectives of the study are as follows:

- i) To examine the existing accounting system followed by co-operative organization in Chitwan district.
- ii) To identify the major problems faced by co-operative organization in maintaining the account.
- iii) To examine the efficiency and effectiveness of accounting system of co-operative for providing financial information to the management for planning policy making and decision making.

1.4 Significance of the Study

Co-operative organization is such a organization which is establish by economically poor people for the mutual benefit. In the context of world-wide

scenario most of developed country is being able to get success by the help of co-operative organization. Therefore it need to make our industrialization process dynamic and consolidated by developing and expanding co-operative organization in keeping with our limited markets, place of technical know-how, position of transportation and the geographical structure of the country. Co-operative sector is the backbone for the developing countries like Nepal. To develop and strengthen the co-operative sector financial aspect should be strong. It is impossible to take correct (action) decision in the absence of proper information. Because of that they are losing benefit. Even they do not know properly about the sources of income and expenditure.

This study helps to examine the existing accounting system used by co-operative organization and identify the accounting problem faced by co-operative organization. Besides that, these studies also help to identify how the supporting institutions (government and Non-government) have been providing the accounting knowledge for co-operative. Similarly, it also helps to suggest the appropriate accounting system which will sufficient to provide the information to management for decision making appropriate in term of cost, effectiveness for display or present the entire transaction of co-operative lastly, it provides literature to the researchers who want to carry out further research in this field.

1.5 Limitations of the Study

The following are the major limitations of the study:

- i) This study based on primary data only. So, the limitation of primary data may exist.
- ii) The time frame and resources are also constrained in this study.
- iii) This study takes only some of co-operative establish in Chitwan as sample and draw conclusion. So the conclusion drawn may suggestive rather than prescriptive.
- iv) This study focuses only on accounting system of co-operative organization in Chitwan district.

1.6 Organization of the Study

The project study is divided into the following five chapters:

Chapter one: It entitles “Introduction chapter”, the reading materials in this chapter are general background of the study, a brief introduction of the services firms and their background, statement of the problem, objectives of the study, significance of the study, limitations of the study and organization of the study.

Chapter two: This chapter is concerned with literature review. The reading materials in the chapter are conceptual review and review of previous related studies.

Chapter three: This chapter consists of research methodology adopted for the study and includes research design, data collection procedures and data analysis tools.

Chapter four: The chapter comprises data presentation and analysis and findings.

Chapter five: This chapter is concerned with the output of the study in the form of summary, conclusions and recommendation.

CHAPTER - TWO

REVIEW OF LITERATURE

2.1 Introduction

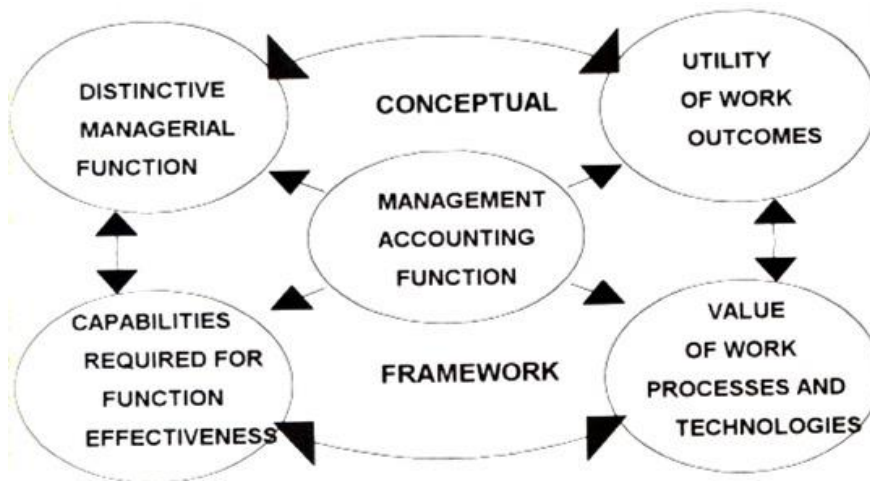
Review of literature includes consulting books and reports of previous studies in the related field. Such as study reports, text books, articles, journals, thesis and dissertation etc. The main objectives of view of literature is to gain more knowledge about the subject in other being studies. This helps to find out why research study has been conducted in one's choice field to study and what remains to be done. it provided the foundation for developing a comprehensive theoretical framework from which hypothesis can be developed for testing. The literature review links the present studies.

2.2 Conceptual Framework

The description of management accounting developed in this statement can be elaborated through a set of concepts categorized in terms of

- a) The distinctive *function* of management accounting within the management process in organizations;
- b) The way in which the *utility* of the outcomes of the management accounting process can be tested;
- c) *Criteria* which can be used to assess the value of the processes and work technologies used in management accounting; and
- d) *Capabilities* necessarily associated with the effectiveness of the management accounting function overall.

Each category of concepts articulates with the others as a conceptual framework for management accounting. The conceptual framework can be illustrated as follows:



The conceptual framework can be used to describe best practice in management accounting because it focuses attention on

- a) The capabilities required for effective performance of the distinctive work of the function;
- b) Assessments of the organizational value of the work outcomes of the function; and
- c) The usefulness of the function's work processes and technologies in securing such outcomes.

Within each category of the conceptual framework, the following specific concepts can be developed in further elaboration.

These concepts describe the function in terms of its resource productivity focus, value orientation, business process orientation and team orientation.

Resource Productivity Focus

The management accounting process is focused on the efficient and effective use of resources in organizations. Attention is focused on the transformation of resources in and out of financial forms, and on attendant patterns of waste (resource loss) and value generation (effective use of resources). Resources in monetary and physical forms are scrutinized, along with resources consumed by organizational structures, systems, procedures, processes and human resources practices.

Value Orientation

The effectiveness of resource use is judged in terms of the value generated in both product/service markets (for customers) and capital markets (for shareholders), while satisfying the requirements of other key organizational stakeholders (including suppliers, staff, financiers, and the community at large).

Resource use is judged effective if it optimizes value generation over the long run, with due regard to the externalities associated with an organization's activities.

Waste (resource loss, idle resources), unfocused use or consumption of resources, and inattention to environmental or social concerns are likely to be judged ineffective.

Business Process Orientation

Management accounting work is centred on the core and enabling business processes of an organization, involving customers, suppliers and other stakeholders. Thus, it is concerned with

- a) Inter-relationships between organizational processes and inter-organizational value chains;
- b) Interfaces between organizational processes and work technologies, structures, systems and cultures;
- c) The alignment between organizational processes and product/service strategies; and
- d) The way in which resources are deployed, used and consumed by organizational processes in generating value over time.

2.3 Definition of Accounting

Some definitions concerning the term 'accounting' has been maintained here.

"Accounting is a systematic generating and communicating financial information to develop the result of operation of entrepreneur." (Sharma and Dhital, 1991: 20)

"Accounting is the art of recording, classifying and summarizing in the significant manner and in term of money transaction and events which are impart at least of financial character and interpreting the result" (AICPA, 1996: 17)

"Accounting is a consider as one of the most effective tools of the management for measuring efficiency from the above definition, it is clear that accounting means the collection and processing of financial data of an entity to report the decision maker. In general term there is aspect of accounting function which it adopted to suit the business transaction. The second aspect deals with methods of controlling day to day business operation. The third aspect is the management or service aspect which analyze business situation for appearing the past and deciding the best action to flow in the future." (Suran, 1999: 30)

In the above definition accounting means the process of analyzing, financial transaction and recording them in the book of account to show the financial result of operation. Accounting is the eye of the business which shows a path to go ahead. It is also known as administrative tools a means to and in which provides the financial information need for successful administrator and show the clear picture of revenue and expenditure mad for specific periods. The financial picture mostly has to parts, one showing profit and loss and another showing assets and liability (B.S.)

2.3.1 Origin and Evolution of Accounting

The exact date of the origin of book-keeping is not yet known. It is said that the practice of book-keeping began with the invention of money in Lydia, Greece during 700 B.C. clearly, book-keeping in its true sense, first, arose in classical Greece. However, the practice of the well-known system of double entry book keeping slowly and quietly evolved in Italy during the 13th and 14th centuries. It became well-known to the world only after Luca Pacioli, a Franciscan friar and a lecturer on mathematics, got his book 'Summa de Arithmetica, Geometria, Proportionet, Proportonlita' (Everything about arithmetic, Geometry and Proportion) first published in 1494 in Venice, Italy. The book contained a chapter headed particulars communize Scriptures (A section on Accounts and Records) which dealt with the principles of double entry book-keeping. The first English

translation of De computers was published by Hugh Old Castle in 1543, which popularized double entry book-keeping all over the world. Many improvements were made thereafter from time to time to the original form of double-entry system as described by Luca. Today, the double-entry system has been established as the most systematic and scientific system of book-keeping and is universally applied in all forms of entities. Therefore, Luca Pacioli is regarded as the 'father of modern book-keeping'.

The history of account keeping is not so old. In fact, accounting was found started in Nepal during Lichchhivi period and was developed somewhat during Malla period. During Lichchhivi period government revenues were collected from Trust (Guthi), property tax (Zinsi Kar) and voluntary work (Shramdan), and renovation of temples and for conducting religious items (Hom, Kotihom and other sorb of Yagya). During Malls periods, along with the above mentioned sources, the government collected revenues also from trade and custom. Like in the previous days they also incused expenses for war, construction and renovation of temples ponds, stone and golden taps for drinking water supply, irrigation, holy shrines and for conducting religious rites. But since the financial transactions were very few in number they didn't have the number they didn't have to developed system of accounting. The record keeping system was not systematic, scientific and long lasting.

The importance of account keeping is felt more those countries. Where the government are responsible to the people and where the financial transactions are quite voluminous. Before the down of democracy in 2007 B.S. neither the government was responsible to neither words the people nor was the volume of financial transactions considerable hardly. As such the government could not make enough effort to develop the good accounting system in the country. Going to the lack of a set type of accounting principle, people used to keep account records in offices according to their own knowledge and experience. Hence varieties of accounting were followed in different part of the country.

Infect, the need of a definite system of accounting was felt since the origin of modern history of Nepal for record of government revenues and expenses,

different offices were established at different times at different system of accounting. For example, for recording land revenue and administrative expenses of the government, two books called Laldhadda and Mothdhadda were introduced in the country in the year 1871 and 1879 B.S. respectively.

In the year 1925 BS, an office called Kitab Khana was established with a view to register the name of the government employees and to record their salaries. The office is still functioning. At the sometime the government established a different office called Kaushi Tosha Khana for keeping proper record of such salary expenses. At present the function of such office is limited to the determination and distribution of pensions to the retired government employees. Towards 1936 B.S. Khardar Gunbanta, a senior official that time, propounded a new accounting system called Shyaha Shresta Pranali. It was an advanced form of accounting, which brought a greater resolution in the history of accounting keeping. The government followed it with the object of exhibiting the actual position of it remained in practice in Nepal till the fiscal year 2022/23, for more than eight decades. The advantage of this system was that it could show the total of incomes, expenses and balance at time unless this system three different books of accounts were found maintained namely, Shyaha (a kind of journal) Awarje (a kind of ledger) and dhapot.

Shyaha Shresta, though on important system, was pruned insufficient especially in places where transactions were numerous and voluminous. As the volume of the financial transactions in Terai belt used to be much more than in mountainous regions, this Shresta Pranali could not meet accounting needs of Terai regions.

Hence in the year 1968, the government followed a new accounting system in the office of such belt in the name of "Faram Shresta Pranali" but, in the mountainous regions the name Shyaha Shresta Pranali was in practice. Thus both the Shyaha and faram Shresta Pranli were in practice in Nepal at the same time.

After the historical revolution of 2007 B.S. Nepal experienced a new democratic government, which was totally responsible towards the people with a view to communicate to the Nepalese people about revenue and expenditure position of the country, then government declared budget system on 21st Magh 2008, which

was quite a new thing for the people of Nepal as both the accounting system could not supply timely date, statistics, and other information necessary for the preparation of annual budget, the government fill the necessity of the new and convenient accounting system for the country for the purpose of auditing the books of accounts of Nepal government offices and of checking frauds and misappropriation of cash and budget, the auditor general, as a constitutional body according to the constitution of Nepal 2015. In the same year with a view to facilitate budget preparation and implementation and to establish there by uniformity in financial administration a new act called "Procedural suit of Government fund expenditure 2016" was enacted. As a result, so as to facilitate payment of government fund expenditure and to exercise control on budget, the government followed in the year 2017, a new accounting system. It was named as Bhuktani Shresta Paranali (Payment Accounting System). Since then government expenditure were recorded according to budget head.

In 1960 (20th Magh 2019 B.S.) accounts committee was formed to study and analyze the problem of accounting in Nepal. After detailed study of 288 days, the committee made a report to introduce a new accounting system. His majesty the King Mahindra granted royal seal on It in 1961 (on 2nd Chaitra 2018 B.S.) and it become a new accounting system of government of Nepal but it was put in to practice only from fiscal year 2062/63 for the budget appropriation and from 1974/75 assumption may not be true in reality.

2.3.2 Accounting Evolution in Saving and Credit Co-operative Organization

Co-operative organization, like individuals, wish to increase their ability to acquire and hold goods and services and in general seek to maintain higher level of economic power as possible. The basic motive of co-operative is mutual benefit and to earn reasonable level of profit. Short run goal as well as long tern goal should be harmonized. Accounting is a mean of providing information to the managers to achieve these goals.

Accounting is helpful to justify their existence by pointing out to the management what should have been done after co-operative organization have failed to achieve past goal. In addition, accounting is useful in so far it assists in

improving future performance. Accounting report provides the true picture of co-operative organization. On it can find that the strong an aspects and shot comes. And suggest the right way to be adopts by the co-operative organization. Basically, these two factor i.e. revenue is expenditure which affect the profitability or earning capacity of the co-operative. Account: analyze these revenue and expenditure by applying different accounting tool and suggest the appropriate model. In short run, profitability can maintain easily, but, that will effect in long term. So, for the long run success account is the indispensable aspect of the co-operative organization.

In the context of co-operative organization after the restoration of democracy formal accounting practices has been started. As per the necessity different changes has been done time and again come to the present stage which the co-operative organization use at present.

2.3.3 Objective of Accounting

The major objectives of accounting are as follows :

(i) To maintain record: Since human memory is limited, it is very difficult for a person to remember all financial transaction which a business performs. So, that accounting maintains permanent records of all financial transaction of a business in books and computer based on set of rules and regulation.

(ii) To ascerting profit and loss: Most of the organization has the main objective of earning profit. Therefore accounting helps to ascertain profit or loss of the organization by preparing profit and loss account at the end of particular period.

(iii) To show the financial position: Beside it profit or loss the organization meets to know about its financial position at the end of period. Then from accounting show the financial position of the organization by preparing statement called the balance sheet. The balance sheet is statement of capital, liabilities and assets of the business.

(iv) To communicate the information: Financial information is essential to its user for taking financial or other decision. Therefore accounting communicates the information of operating results and financial position of the business to different uses for their decision making purpose.

(v) To determine Tax Amount: Every organization has to pay tax of government i.e. it provides financial information to the tax office, which helps in determining the amount of tax liability.

2.3.4 Accounting Concepts and Principles

A. Business Entity Concept: This concept states that the business and its owner are separate and different entities. According to this concept all transactions of the business have to be accounted from the view, point of the business and not from the view point of its owners. The distinct between the business and its owners is essential in order to ascertain the true picture of the business. If the two are not separated for all accounting purpose, the transaction of the business will be mixed up with the personal transactions of its owners and the true picture of the business cannot be obtained.

B. Cost Concept: This concept implies that the cost of anything such as service or on asset is recognized when it is incurred and when cash is paid for it. According to the concept, the cost is assumed to be incurred when the sender or the assets is used to generate revenue. Besides, the concept assumed that the asset is taken into account at the cost of its purchase and not its market value.

C. Matching Concept: This concept provides guidelines as to how the profit or loss of business should be determined. The concept, therefore, states that the revenue earned in a period has to be matched with the expenses incurred in the same period so as to find out the true profit or loss of the business. While matching the expenses with the revenue, the latter should be realized first and then only the expenses relating to the revenue should be recognized. An expenses or revenue of the previous or the next year of this should not be matched with those of this year. If they are matched, the true profit or loss cannot be ascertained.

D. Going concern concept: This concept implies that a business has an indefinite life and it exists for a long period of time. All business transactions are performed and recorded from this point of view the long term expenditures such as the purchase of land building and machinery that the business makes are recorded in books of account assuming that it will exist and run for a long period of time. Their costs and not the current resale values are recorded spreading over their estimated working lives.

E. Money measurement concept: This concept assumed that only those business transactions which are measured and expressed in monetary terms have to be taken into account. It is also assumed because money provides a common measure for different goods, services, assets and liabilities. This concept also assumed that monetary units such as rupee are stable units in value, but this assumption may not be true in reality.

F. Revenue Concept: This concept is also called realization concept. The concept states that revenue is assumed to be earned when it is realized. According to the concept, revenue is realized and services are transferred to the buyers and services are provided to the clients for cash or for cash assets or in anticipation of realizing the value of sales on a future date.

G. Accounting period concept: The accounting period concept implies that for the purpose of reporting financial information, the whole life of the business is divided into imaginary time intervals. Each time interval is called an accounting period which is normally of one year. In Nepal, it begins on the first Shrawan every year and ends on the last day of Ashadh the next year.

H. Accounting equation (Dual aspect concept): Dual concept may be stated as "for every debit, there is a credit". Every transaction should have two side effect of same account. This concept has resulted in accounting equation, which states that of any point of time the assets of any entity must be equal (in monetary term) to the total of owner's equity and out side's liabilities. This may be expressed in the form of equation.

$$\begin{aligned} \text{Assets} &= \text{Capital} + \text{Liabilities} \\ \text{Or, Assets} &= \text{Liabilities} + \text{Capital} \\ \text{Or, Assets} &= \text{Liabilities} + \text{Income} + \text{Capital} \\ \text{Or, Assets} &= \text{Liabilities} + (\text{Revenue} - \text{Expenses}) + \text{Capital} \\ \text{Or, Assets} + \text{Expenses} &= \text{Capital} + \text{Revenue} + \text{Liabilities} \end{aligned}$$

2.3.5 Accrual Accounting and Cash Basis Accounting

2.3.5.1 Accrual Accounting

Accrual accounting is a system of accounting in which revenues and expenses are recorded as they are earned and incurred not necessarily when cash is received or

paid. Accrual accounting requires that revenues and expenses be assigned to their proper accounting periods. There are two principles for accrual accounting.

2.3.5.2 Revenue Recognition Principle

How do we assign revenues to particular periods? First how do we determine when revenues have actually been earned? The revenue recognition principle states that revenues are recorded when two main criteria have been met.

(i) The earning process is substantially complete, which generally means that a sale has been made or services have been performed.

(ii) An exchange has taken place.

2.3.5.3 The Matching Principle

Once a company determines which revenues should be recognized during a period, how does it identify the expenses incurred? The matching principle requires that all expenses incurred to generate the revenues recognized in an accounting period be matched with those revenues. The cost of the merchandise sold, for example, should be matched to the revenue derived from the sale of that merchandise during the period. Expenses that cannot be matched with revenue are assigned to the accounting period in which they are incurred. Recognized revenues - matched expenses net income for the period

Accrual basis accounting is the foundation of accounting for most business today.

2.3.6 Cash Basis Accounting

Some small businesses record transactions and recognize revenues and expenses only when cash is received or paid. With the cash approach, income is what is left when cash disbursement of a period are subtracted from cash receipts during that period. Cash basis accounting is a system of accounting in which the transactions are recorded and revenues and expenses are recognized only when cash is received or paid.

This system doesn't make a complete record of financial transactions of a trading period, as it does not record outstanding transactions like outstanding expenses and outstanding incomes. The system being used on a record actual cash receipts and actual cash payments will not be able to disclose correct profit or loss for a

particular period and will not exhibit true financial position of the business on a particular day.

2.4 System of Accounting

There are two system of accounting in use they are:

- a. Single entry system
- b. Double entry system

2.4.1 Single entry system

Under the single entry system on Book-Keeping only one aspect of every transaction is recorded in the books of account. This system usually adopted by firms having few transactions and professional man. In this system the main records kept are those Cash and personal accounts. Sometimes, subsidiary books may be maintained under this system but posting is made only those entries which affect personal accounts.

Single entry system of book-keeping is not any particular system of accounting, but rather it is the double entry system is an incomplete and disjointed form (Juneja, et al, 317). Kohlet has defined single entry system as follows: "A system of book-keeping in which as a rule only records of cash and personal accounts are maintained, it is always incomplete double entry varying with the circumstances"

Single entry system can be classified into two headings:

- A) Pure single entry
- B) Single entry in the popular

A. Pure Single Entry: Under this type of single entry the dual aspects of each transaction is ignored. Only the personal account of the debtors and creditors are kept all real and nominal account are not maintained.

B. Single Entry in the Popular Sense: Single entry in the popular sense or quasi single entry are terms covering numerous systems of book-keeping which, through differing one form the other in detail. It is also known as incomplete form of double entry system. Under this system some subsidiary books are maintained but only those entries are posted which affect personal accounts.

Single entry in the popular sense may consist of:

- i) Double entry for certain transaction such as cash received from debtors or cash paid to creditors,
- ii) Single entry in respects of some transactions such as purchase of fixed assets, payment of expenses, etc. and,
- iii) No entry in respect of some transactions such as bad debts, depreciation, loss of stock by fire etc.

It is not possible to Asserting profit under the single entry system

Prepare regular profit and loss account under this system so the exact profit or loss for a particular period cannot be ascertained. But some procedure can followed to ascertain the rough profit or loss made by the firm. When the single entry system is in use the profit or loss for a period can be ascertained by comparing the capital at the end of the period with that at the beginning, adjusting the effect of with draws or introductions of capital during the period. If the closing capital exceeds the opening capital, such excess is considered to be profit for the period, and if the opening capital exceeds the closing capital, such excess is considered to be a loss for the period. Generally, capital is considered as the excess of assets over liabilities.

Profit or loss can be ascertained by following two methods:

- i) Statement of affairs
- ii) Conversion method

(i) Ascertainment of Profit or Loss by Statement of Affairs

Statement of affairs is a summarized statement of financial position, i.e., a statement of assets and liabilities at a particulars date of business. It is prepared to show the financial position of a business under single entry system of book keeping. It is a very much like a balance sheet. The right hand side of statement of affairs is for assets and left hand side for liabilities. It is prepared with such information as is available from the accounting records maintained under single entry system.

(ii) Ascertainment of profit or loss by conversion method

Under single entry system adequate accounting information is not available. Profit ascertained disclosed by the system might not be real one as much not gladly accepted by tax authority. So sometimes a trader may adopt the double entry system by giving up the single entry system. For this, single entry system must be converted into double entry system.

The conversion of double entry system into double entry system may be done in the following two ways:

- i) Conversion from certain date
- ii) Conversion of the whole set of books

2.4.2 Double Entry System

It is an accounting system under which every transaction requires two entries in the books. One against the party or account receiving is known as double entry system of accounting.

Luca Pacioli first propounded the principles of double entry system in 1494 AD. He described a method of arranging accounts in a way of the dual aspect that is known as double entry system of accounting today.

Every business transaction has two aspects i.e. when receives something, he gives something else in return. This method of writing every transaction in two accounts is known as double entry system of accounting, the two accounts one account is given debit while the other account is given credit with on equal amount. Thus, on any data, the total of all debits must be equal to the total of all credit because every debit has a corresponding credit.

"Double Entry system of book-keeping adheres to the rule, without any exception, that for each transaction the debit amounts (s) must equal the credit amount (s). This is why this system is called double-entry.

2.4.2.1 Advantages of double entry system

The following are the main advantages which can be derived from the use of double entry system (Jain & Narayan):

- i) It provides a complete record of every transaction whether it relates to the personal or impersonal accounts.

- ii) It provides an arithmetical check on the records as the total of debit entries must be equal to the total credit of all entries.
- iii) The amount owing to outsiders and the amount due to the business can be ascertained with the help of personnel accounts.
- iv) The profit and loss account can be prepared with the help of nominal accounts which is helpful to the business to ascertain the operating results of the business.
- v) It helps to prepare the balance sheet of the business which is helpful to ascertain the financial position of the business on a particular day.
- vi) It helps to reduce the occurrence of the errors and frauds and when occurred can be deducted easily. It can work well with the help of internal check system.

2.4.2.2 Factors Common to Every Business

To have a clear understanding of the double entry system, it is necessary to keep in mind the following factors which are common to every business.

- i) The business form enters into business dealings with a number of person or firm. So, an account of each person or firm, with whom the business has business dealing, is opened such accounts are known as personal accounts.
- ii) The business must necessarily have some assets such as stock, cash, furniture etc. with the help of which the business may be carried on. Therefore, an account of each asset in the business is opened. Such accounts are classed as real or property accounts.
- iii) There must be certain sources from which the income of the business is derived. Similarly, certain expense must be incurred to earn the income. Therefore, an account of each expense and increase is opened in the books. Such accounts are known as nominal or fictions accounts.

Thus, three types of accounts namely, personal accounts, real or property accounts and nominal or fictions accounts are opened to keep a complete record of all the financial transaction of the business.

2.4.2.3 Rules of Debit and Credit

The rules of debit and credit can be understood by either using the accounting equations as basis or types of accounts as the basic.

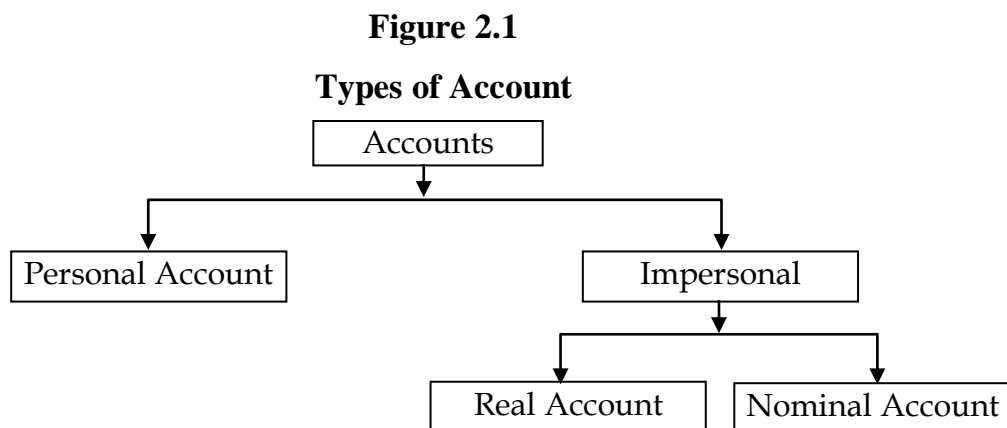
Rules for Debit and Credit on the basis of the accounting equation.

The rules can be translated in the form of an accounting equation

$$\text{Assets} + \text{Expenses} + \text{Drawing} = \text{Liability} + \text{Capital} + \text{Revenue}$$

Rules for Debit and Credit on the Basis of the Account

Rules of debit and credit were conventionally explained using type of accounts as the basis. In this method, accounts are classified as personal and impersonal accounts.



Source: "Elementary Accounting" Shrestha, Ram Prasad

Personal Account

Accounts involving, both natural and artificial person called personal accounts. Natural person represents human beings. Artificial person represents the firms, companies, institutions etc. i.e. Ram and Co., Shrestha furniture, Rita A/C personal accounts either receive or give something to the business, that is why the rules also identify the debit or credit on the basis of receiver and given.

Impersonal Accounts

Accounts which do not involve persons are impersonal accounts. There may relate to assets, expenses, income, revenue, loss or gains. Impersonal accounts are classified as real and normal account.

2.5 Journal

Journal is a book of original entry because transaction is first written in the Journal from which it is posted to the ledger at any convenient time. "Journalizing means recording a transaction in the journal and the form in which it is recorded is known as a journal entry" (Jain & Narayan). "If two or more transactions of the same nature occur on the same day and either debit account or credit account is common, such transactions can be conveniently entered in the journal in the form of a combined journal entry instead of making a separate entry for each transaction.

A. Treatment of Cash/Credit Purchases

- i) Cash Purchase
Purchase account Dr.
 To cash account
(Being Good purchased from)
- ii) Credit purchases
Purchases account Dr.
 To supplier's a/c (Name of supplier)
(Being Goods purchased on credit)

B. Treatment of Payment on personal/expenses account

- i) Personal payment
Person's a/c..... Dr.
 To cash account
(Being Payment made to)
- ii) For expenses
Expenses a/c (e.g. salary a/c)..... Dr.
 To cash a/c
(Being Salary paid for the month)

C. When amount is received from a person

- Cash a/c..... Dr.
 To person's a/c
(Being Amount received from)

D. When amount received represents business income

Cash a/c..... Dr.
 To income a/c (e.g. commission a/c)
(Being Commission received from.....)

E. Treatment of Trade discount

Trade discount is not recorded in the books. The transaction is recorded with only the net amount i.e. (list price-trade discount).

F. Treatment of cash discount (Full settlement)

i) Cash discount received Person's a/c (e.g. Z co. Ltd. a/c).... Dr.
 To cash account
 To discount received a/c
(Being Payment made to with cash discount)

ii) Cash discount allowed Cash a/c..... Dr.
 Discount allowed a/c..... Dr.
 To person's a/c
(Being Cash received with discount allow)

iii) Treatment of bad debts (Debtor becoming insolvent)
 Bad debts a/c..... Dr.
 To person's a/c
(Being Bad debt written off)

G. Treatment of bad debts recovered

Cash a/c..... Dr.
 To bad debts recovered a/c
(Being Bad debts recovered from

H. Treatment of drawing (Personal expenses of the owner)

Owner's drawing a/c Dr.
 To cash a/c
(Being Mr..... draws Rs.....)

I. Treatment of exchange of new asset with old one plus cash payment.

Asset a/c (diff. amount i.e. new - old)..... Dr.
 To cash a/c
(Being new asset exchange with old one and paid cash for excess.)

J. Treatment of depreciation charged on fixed assets

Depreciation a/c..... Dr.

To asset a/c.....

(Being Depreciation charged)

K. Treatment of payment/received of representative personal accounts.

- i) Expenditure incurred but remained unpaid which is known as "Outstanding expenditure"

Expenses a/c..... Dr.

To outstanding expenses a/c

(Being Expenses e.g., salary outstanding)

When payment made

Outstanding expenses a/c..... Dr.

To cash

(Being outstanding expense e.g. salary paid for previous month)

- ii) Income accrued due but not received is known as "Income accrued due"

Income accrued due a/c..... Dr.

To income e.g. divided a/c

(Divided accrued but not received) When received

Cash a/c..... Dr.

To income accrued due a/c

(Being Income e.g. divided received for previous year.)

All the co-operative have been maintained the record of journal as per the rules.

2.6 Ledger

The final destination of all entries made in journal is the ledger as they are all subsequently to it. The ledger is the most important book under the double entry system. It is permanent book of record, which contains all accounts relating to financial transactions of a business. Therefore it is also called the book of accounts. An account contained in the ledger book is called ledger account. It provides the financial information such as how much a particular person owes to or from the business, what is the value of particular assets the business process at a point in time, or what is the amount of a particular head of expenses or income the business has incurred or earned during a particular period.

2.7 Subsidiary Books

Subsidiary books are a part of journal created for recording specific transactions of the business, e.g. purchase book, sales book, cash book, bill receivable and bill payable books etc. These books are maintained with a view to avoid the disadvantage of journal as mentioned above. As it is more practical, convenient and can provide information easily and readily to system is also called 'practical system of accounting.

It is also known as sub journal or subsidiary book. "The system under which transaction of similar nature are entered in the relevant subsidiary book and on the basis of which ledger is written is known as the 'Practical system of book-keeping'. This system reduces labor and time of recording the transactions as impersonal accounts, viz, sales account, purchases account etc. receive the posting of totals and not of individual transactions. However, this system also conforms to the basic rules of the double entry system (Juneja, Chawla and Sexena, p.88).

Generally the following subsidiary books are used in the saving and credit co-operative.

2.7.1 Cash Book

To record cash receipts and payments including transactions relating to bank.

Types of Cash Book

A. Single column cash book

- i) Cash book and Bank book

B. Double column cash book

- i) Cash book with cash and discount column
- ii) Cash book with bank and discount column
- iii) Cash book with cash and bank column

C. Triple Column cash book

- i) Cash book with cash, bank and discount column

A) Simple Cash Book

The Cash Book, which contains only one column of amount, is called single column Cash Book. Receipts of cash and cheque will be entered on the debit side and payment of cash and endorsement of cheque received on the credit side of

Cash Book. The issue of cheque is not required to enter in cash book containing cash column only.

B) Double Column Cash Book

Double Cash Books are the following three types:

- a) Cash book with Cash & Discount Columns.
- b) Cash book with Bank & Discount Columns.
- c) Cash book with Cash with Cash and Bank Columns.

a) Cash Book with Cash & Discount Columns

Cash Book may contain a column for discount. Cash discount arises at the time of cash receipt and cash payment. Cash discount refers to deduction in cash received and payments. It may be received and allowed. The suppliers of goods allow cash discount to the customers at the time of cash received from them and it is received at the time of cash payment to the suppliers. Provision of cash discount is made by the suppliers of goods for encouraging prompt payment from debtors. Discount allowed is an expense and so required to be debited and received in an income and so credited. It is closely related with cash received and cash payment. So it is convenient to add a column for 'discount' on each side of the Cash Book for recording discount expenses and income. The Cash Book containing discount column is termed as double column Cash Book.

b) Cash Book with Bank & Discount Columns

When cash transactions are made through bank, Cash Book with bank and discount column is maintained. In such case all cash receipts will be through bank and payments through cheque.

When cash or cheque is received through bank from the customers, it is entered in the debit side of bank column of Cash Book. And similarly, when cheque is issued to the party, the bank column of cash book is credited. The discount column of debit side of the cash book represents discount allowed to the customers. The customers pay less than what is due from them. So it represents a loss sustained by the merchant or firm. The discount of the credit side represents discount allowed to the merchant by his creditors. And it represents gain.

c) Cash Book with Cash & Bank Columns

Some firms may maintain Cash Book with cash and bank column ignoring discount column. Such Cash Book combined the cash account and bank account. And the procedure of recording in such Cash Book is the same as to recording in single column Cash Book and Bank Book.

Contra Entry

Cash received from the customers and drawn from bank are shown on the debit side of cash column and payment or deposit into the bank on credit side of cash column. Amount paid into the bank and withdrawn from bank for official use affect both side of the cash book. Such transaction effect debit side of the cash column and credit side of the bank column. If cash is deposited into bank, it affects credit side of Cash Book on cash column and debit side of the Cash Book on bank column. Likewise, if cash is withdrawn from bank for office use, then it affects debit side of Cash Book on cash, column and 1 credit side on bank column. Such entries are called 'contra entries'. Contra entries are those entries, which affect the both side of the Cash Book, To distinguish contra entries from the rest of then tries the letter 'c' is written against in the L.F. column.

iii) Triple Columns Cash Book

Cash Book with Cash, Bank and Discount Columns

These days' bank transactions are more numerous than cash transactions. Bank transactions refer to payments into and out of bank. So most firm maintain cash book with cash, bank and discount column. The transactions relating to cash, bank and discount are interrelated. So it is convenient and appropriate to have triple column Cash Book.

2.7.2 Purchase Book or Purchase Journal

Business organization purchase goods for the purpose of resale and office uses. These goods are purchased on cash basis and on credit basis. Purchase book may be defined as the subsidiary book which is prepared to record the goods purchased on credit and for selling. Purchase book shows the information of supplier, quantity and price of goods purchased, availability of discount and other terms

and condition regarding the purchases goods, delivery of goods and mode of payment. It is also known as 'Purchase Journal', 'Purchase Day Book' or 'Invoice Books'. Cash purchases will not be entered in purchases book (to be entered in cash book) and credit purchases of goods not meant for resale i.e. assets shall be entered in journal proper and not in the purchase book.

2.7.3 Purchase Return Book or Return Outward Book

Goods purchased may have to be returned to the suppliers for various reasons such as not up to sample, goods delivered without order, goods damaged in transit, goods priced differently than the catalogue etc. Purchase return book is prepared to record all the goods returned to suppliers. Purchase return book states the quantity and price of goods returned to suppliers due to the particular cause. Like purchase book and sales book, purchase return book also contains six columns i.e. date, particular, debit note number, ledger folio, details and amount which is as below :

Debit Note:

When goods are so returned to the suppliers, the transaction is called return outward or purchase return. For every return, a debit note is prepared in duplicate and the original one is sent to the supplier for making required entries in its book. The debit note contains the name and address of the suppliers, the detailed description of goods returned and reason for return.

2.7.4 Sales Book/Sales Journal

Sales book may be defined as the subsidiary book which is prepared to record the goods sold on credit. Sales book depicts the information of customers, quantity and price of goods sold, discount allowed and other terms and condition regarding the sales of goods, delivery of goods and mode of payment.

2.7.5 Sales Return Book or Return Inward Book

Sales return book or return inward book is prepared to record all the goods returned from the customers. Sales return book states the quantity and price of goods returned from debtors due to different causes.

Credit note: "When a debit note is received along with the goods returned from the customer, it is a claim on us. If claim is accepted then credit note, usually

printed in red ink, with full details is sent to the customer signifying our acceptance of the goods and customer's account being given the required credit" "When a debit note is received along with the goods returned from the customer, it is a claim on us. If claim is accepted then credit note, usually printed in red ink, with full details is sent to the customer signifying our acceptance of the goods and customer's account being given the required credit"

2.8 The Journal Proper

Subsidiary books are prepared in the business to record the repetitive transactions like credit, purchases, credit sales, sales returns, purchase returns, cash transactions, etc. In the business organization, there are some other transactions, which are occasional or unusual and are not recorded in specially classified books. To record these unusual and occasional transactions, a separate journal is to be prepared which is termed as journal proper. For example, last year's balance of assets and liabilities, outstanding expenses, prepaid expenses, income receivables advance received income, credit purchase of assets, credit sales of assets, drawing of goods and kinds by the owner for his personal use, interest on capital, etc. are such transactions which are recorded in journal proper. Thus, journal proper may be defined as a journal in which unusual and occasional transactions of the business are recorded systematically in a chronological order. The transactions, which are not recorded in any subsidiary book, are recorded in journal proper. Following transactions are still recorded in the journal (Ibid):

- i) **Opening entries:** At the beginning of the year the opening balances of assets and liabilities are journalized.
- ii) **Closing entries:** At the end of the year final accounts are prepared. For preparing these accounts various accounts are to be transferred to the trading and profit and loss account which is done by means of journal entries.
- iii) **Rectification entries:** When any error is detected in writing up the books then it is rectified by means of suitable journal entry.
- iv) **Adjustment entries:** Since accounting follows "accrual concept: therefore adjustment has to be done at the end of the year regarding."
 - a. Expenses incurred but not paid;

- b. Expenses paid but benefit to be available in the next period.
- c. Income becoming due but not received.
- d. Income received in advance; and
- e. Charging depreciation on fixed assets etc.

The adjustments are incorporated in the account books by means of journal entries.

- v) **Transfer entries:** If any amount is to be transferred from one ledger account to the other, then it is done by means of journal entries.
- vi) **Miscellaneous entries:**
 - a. Purchase and sale of fixed assets on credit.
 - b. Writing off of losses due to bad debts, fire, accidents etc.
 - c. Any extra concession to be allowed to any customer or any change to be levied after the issue of the invoice; and
 - d. Any other item for which no subsidiary book has been maintained.

2.9 Petty Cash Book

Every business has to make payments involving petty amounts. That is, a firm has to make a large number of small payments, like bus fare, cartage, postage, telegrams etc. such payments by their very nature cannot be made by cheques. Usually, the petty cashier makes these payments, which maintain a separate cash book to record such small payments only. Such cash book is known petty cash book. It is more efficient and convenient to pay such amounts out of readily accessible cash fund, often called a float.

For maintaining an efficient control an imprest system is established with the fund regularly reimbursed by way of a cheque. The system works as follows:

2.10 Imprest System

The best system of petty cash is imprest system. Under imprest system, the expenses are reimbursed periodically. Under this system, the petty cashier is provided with a fixed amount of money known as imprest or floats which is sufficient to meet the needs of balancing periods. Balancing period may be a week or month. At the end of the balancing period, the petty cashier is given a cheque equal to the amount of payment made during the same period.

2.11 Analytical Petty Cash Book

Generally, petty cash book is maintained in analytical form, which helps to obtain the analysis of expenditure. Under analytical cash book, expenses are analyzed on the basis of nature and types. The credit side of petty cash book contains number of columns for different head of expenditure including column for total. The debit sides of petty cash book contain only one column for the cash received from the cashier.

The petty cash book is "balanced periodically. The various expenses are debited and a petty cash account is credited. The petty cash account will then show the balance in the hands of the petty cashier.

2.12 Bank Reconciliation Statement

2.12.1 Introduction

The difference between the Cash Book and the Pass Book balance need to be explained. For explaining the difference between the Cash Book and Pass Book balance, reconciliation statement is required to be prepared. And such reconciliation is called Bank Reconciliation. Bank reconciliation is a schedule explaining any difference between the balance shown in the Bank Pass Book and the balance shown in the Cash Book. A Bank Reconciliation Statement is periodically prepared to explain the reasons for the differences between balance shown by the Pass Book and that shown by the cash Book. It is an integral part of any process of control over cash system. This statement may disclose internal control failures, such as unauthorized cash disbursement or failures to deposit cash receipts, as well as errors in either the Bank Pass Book or the Cash Book.

2.12.2 Cause of difference between cash book and pass book balance

Certain transactions recorded in the cash book may not have been recorded in the pass book. In the same way, transactions recorded in the pass book may not have been recorded in the cash book. As such the balance shown by the cash book and pass book differ. Following are the main causes that make difference in the pass book and cash book balance.

- i) Cheque issued but not cashed.

- ii) Direct payments by the customers into Bank.
- iii) Interest and dividend collected & credited by bank.
- iv) Interest allowed by bank.
- v) Any others amount credited by the bank.
- vi) Cheque paid into the bank but not cleared and credited.
- vii) Bills discounted with bank but dishonored.
- viii) Direct payment by the bank on standing instruction.
- ix) Bank charges debited in the pass book.
- x) Interest on overdraft charged by the bank.
- xi) Any others amount debited by the bank.

2.13 Meaning and Concept of Depreciation

2.13.1 Introduction

Almost all business owns some non-trading fixed or long lasting assets like land, building, machinery, furniture, vehicles etc. These fixed assets are generally used for facilitating activities of the business. Such non-trading fixed assets increase the revenue earning capacity of the business. These assets are basically purchased with the intention of permanent use and not for resale. These assets are not of infinite durability. All fixed assets except land decline in value with passage of time and are reduced to scrap. That is, each year the intrinsic value of the assets declines. Such reduction in the value of asset each year is a loss/or expenses, which is technically termed as depreciation. Depreciation, therefore, means a fall in the value of assets because of afflux of time or physical wear and tear. In others words, the gradual reduction or loss in the value of an asset caused by its use for the purpose of earning revenue is called depreciation. It also means the allocation of cost of fixed assets over its economic useful life. Actually, the depreciation is the allocation of expired cost of fixed assets.

2.13.2 Method of Depreciation

There are various methods of providing depreciation of fixed assets and major of these are listed below:

- i) Fixed installment Method
- ii) Reducing balance Method

- iii) Annuity Method
- iv) Depreciation Fund Method
- v) Insurance Policy Method
- vi) Revaluation Method
- vii) Machine Hour Rate Method
- viii) Sum of the Year's digits Method.

2.13.3 Fixed Installment or Straight Line Method

Under this method a fixed percentage of the original value of the asset is written off every year so as to reduce the asset account to nil or to its scrap value at the end of the estimated life of the asset. To ascertain the annual charge under this method all that is necessary is to divide the original value of the assets (minus its residual value, if any) by the number of years of its estimated life.

The formula is:

Depreciation Rate (if not given) = $1/n \times 100\%$ (Where n = useful life of asset)

(The rate of depreciation to be applied where the rate of depreciation is not given)

Annual Depreciation (Amount) = $\frac{\text{Cost price of asset} - \text{Scrap value}}{\text{Estimated life of asset}}$

The amount of depreciation charged during each period according to this method is constant or at a uniform rate.

2.13.4 Written Down Value Method

This method is also referred as the Diminishing Balance or Written Down Value (WDV) method. Under this method rate or percentage of depreciation is fixed but it is applied on the reducing balance of assets, i.e., cost less depreciation. That is, annual depreciation amount is determined as percentage of the brought down value of the asset for that year. As much the balance in the asset account will keep on reducing but will never become zero. That is, the value of asset can never reduce to zero. And what remains in the assets account at the end is taken as equal to scrap value.

- i) The annual rate of depreciation is fixed.
- ii) The annual amount of depreciation will decline every year as it is charged at a fixed rate on declining balance of assets.

Written down value=Cost – Depreciation

iii) If the rate of depreciation is not given in the question, the rate of determined by using the following formula.

$$\text{Depreciation Rate (if not given)} = \left(1 - \sqrt[n]{\frac{\text{Scrap Value}}{\text{Depreciable Cost of Assets}}}\right) \times 100$$

Where, n = useful life of asset

Annual depreciation amount = Remaining balance amount of asset × Depreciation rate.

Asset Disposal Account

Sometimes a part of asset is disposed off or discarded, and then it is better to open a asset disposal account the book value less depreciation of the discarded portion should be debited to this account and credited to the asset account. The following entries are passed in sale of an asset.

i) Asset Disposal a/c - Dr

To Asset a/c {with original cost of asset}

ii) Bank a/c - Dr

To Asset Disposal a/c {with amount realized from the sale of asset}

iii) Provision for Depreciation a/c - Dr

To Asset Disposal a/c {with accumulated depreciation on the asset sold}

iv) Profit and loss a/c - Dr

To asset disposal a/c {for transfer of loosen sale of asset}

Or

Reverse entry in case there in profit.

All co-operative maintain the record of depreciation. Almost all co-operative charge dep. under straight line method and diminishing balance method.

2.14 Trial Balance

2.14.1 Introduction

Trial balance is a statement in which the debit and credit balance all the accounts are noted down and finally totaled up to ascertain if they are equal. In other words, it is a statement of debit and credit balances of all the ledger accounts, which is prepared to check their arithmetical accuracy. It is usually prepared at the

end of the financial year after the account have been closed, but if desired it can be prepared, monthly, quarterly or half yearly too. Since it is statement of debit and credit balance of all the ledger accounts, it is necessary that before drawing it, all the accounts should be properly closed.

2.14.2 Objectives of Trial Balance

The following are the main objectives preparing the trial balance:

- i) To have balances of all the accounts of the ledger in order to avoid the necessity of going through the pages of the ledger to find it out.
- ii) To have a proof that the double entry of each transaction has been recorded because of its agreement.
- iii) To have arithmetic accuracy of the books of accounts because of the agreement of the trial balance.
- iv) To have material for preparing the profit and loss account and balance sheet of the business.

2.14.3 Method of Preparing Trial Balance

A trial balance can be prepared by two methods (Juneja, Chawla and Saxena):

- i) Total method: If the total of debit sides of all the accounts in the ledger is placed in one column of the list and similarly total of credit sides of all the accounts in the ledger is placed in another column of the list then this list of total (trial balanced) will be known to have been prepared with totals method.
- ii) Balance method: Second method of preparing trial Balance is to find out the difference of the sides of every account. If debit side of the account is bigger, then insert the difference on the credit side of the account. It is known as "debit balance." If credit side of an account is bigger/then insert the difference on the debit side of the account it is known as "credit Balance." Now prepare list of Balances (trial Balance) by putting all debit balances in one column and credit balance in another column. Such method is known as Balance method.

2.14.4 Errors revealed by trial Balance

If trial balance does not agree, the disagreement may be due to (Ibid) :

- i) **Omission to post an amount in to ledger:** If an item is not posted from journal to ledger, two sides of trial balance shall not agree.

- ii) **Omission to post an amount in trial balance:** It is natural if balance of an account is not recorded in trial balance the two sides of trial balance shall not agree which is an indication of error in accounts.
- iii) **Posting of wrong amount:** If wrong amount is posted in one of the two accounts posting, it would immediately cause disagreement of trial balance.
- iv) **Posting on the wrong side:** When an item is by mistake posted on the wrong side of the ledger account it cause disagreement in the trial balance.
- v) **Wrong totaling of subsidiary books:** If the total of any subsidiary book is wrongly cast, it would can see a disagreement in the trial balance.
- vi) **Wrong totaling or balancing of ledger accounts:** If any account in the ledger is wrongly totaled or balanced, then the trial balance shall not agree.

2.14.5 Errors not Revealed by Trail Balance

Although, two sides of Trail balance will agree, even then accounts may not be free from errors. Such errors are (Ibid) :

- i) **Errors of omission:** If a transaction is not recorded in books of original entry, then both debit and credit effects of the transaction will be united and trail balance, shall not be effected.
- ii) **Errors of commission:** These errors are the results of carelessness of accounting staff and in some of the cases such errors do not affect the totals of trial balance.
- iii) **Compensating error:** Such errors the total of trial balances but in the mean time another error of opposite effect is counted which neutralizes the effect of earlier error.
- iv) **Error of principle:** Whenever any income, or expenditure is not properly allocated between capital and revenue, the mistake so made is called a mistake of principle.

According to study it is found that, all co-operatives have been prepared trial balance for checking the arithmetical accuracy in the process of journal and ledger. It also found that they have proper knowledge of trial balance.

2.15 Final Account

Final accounts, as their names suggest, are the accounts, which are prepared on the final day of an accounting year. The preparation of final accounts is the final step in the accounting process. The final accounts are prepared to ascertain the true profit earned or loss suffered by the business during a particular year, and to reveal its financial position on the date ending that year. The final accounts refer to trading account, profit and loss account and the balance sheet.

Final accounts are the means of conveying to management owners and interested outsiders a concise picture of profitability and financial position of the business.

2.15.1 Trading Account

Trading account is the first part of the final account of a trading venture. It is prepared with a view to find out gross profit or gross loss made in the business for a given period of time. It is prepared in T form of ledger. It shows mainly four types of items of transactions. They are:

- a) Stock - opening and closing stock.
- b) Purchase and sales of goods, purchase return and sales returns.
- c) All expenses relating to the purchase of goods.
- d) All factory expenses except repairs, renewals and depreciation of factory assets.

2.15.2 Profit and Loss Account

Profit and loss account is the second part of final account. Immediately after preparing trading account, this profit and loss is prepared with a view to see the net profit or the net loss of a firm during a given period of time.

2.15.3 Balance Sheet

A statement of assets and Liabilities of the concern at a given date is known as balance sheet. It is prepared at a particular date to show the financial position of a non trading concern. It is prepared in the similar way of balance sheet of trading concern. It is prepared at the end of an accounting period.

All co-operatives have been prepared final account to find out the profitability ratio and level of financial position of co-operative organization.

2.15.4 Receipts and Payment Account

Receipts and payments account is a summary of cash receipts and payments during the accounting period. It records all and receipts all and cash payments including capita receipts and revenue receipts irrespective of accounting period. All cash and bank receipts are recorded on debit (receipts) side and all cash and bank payments are recorded on credit (payments) side of receipts and payment accounts.

2.15.5 Income and Expenditure Account

Income and expenditure account is prepared by non trading concern to reveal surplus and deficit arising out of operating activities during the accounting period. It is one of the final accounts of non trading concern like the profit and loss account of trading concern. All the revenue incomes during the accounting period are shown on income side and all the revenue expenses during the period are shown on debit (expenditure) side of income and expenditure account. The excess of credit side over the debit side i.e. excess of income over expenditure is termed as Surplus, when the excess of expenditure over the revenue income is termed as deficit. The surplus or deficit of income over expenditure is transferred to capital fund. The surplus is added to capital fund and deficit is subtracted from capital fund. This account is prepared on the accrual basis.

2.16 Cash Flow Statement

Cash flow statement is an important financial tool for the management. It is the statement of only cash movement. It is called cash flow statement because it describes the sources and uses of cash. It is also provided information about the inflow and outflow or cash of organization in an accounting period.

The institute of cost and work account of India describes cash flow statement as "A statement setting out of the flow of cash under distinct heads of sources of fund and their utilization to determine the requirement of cash during the given period and to prepare for its adequate provisions.

The statement which reports cash flow during the period classified by operating, investing and financial activities is known as cash flow statement. For this purpose of cash flow statement cash means cash and cash equivalent. FAS has

also defined "Cash" as including both cash and cash equivalent. Cash equivalent are short term highly liquid investment such as money market funds, commercial papers and treasury bills. Cash equivalent should not be confused with marketable securities so they are not includes in cash flow they are treated as cash inflow and cash outflows. Purpose of marketable securities is treated as outflow and sales are treated as inflow on the cash flow statement.

2.16.1 Preparation of Cash Flow Statement

There are two method of preparation of cash flow statement these are:

- (i) Direct method
- (ii) Indirect method

(i) Direct method

The FASB in its SFAS no. 95 "Statement of cash flow" issued in 1987 has classified the cash flow into following four categorized.

- (a) Operating Activities
- (b) Investing Activities
- (c) Financing Activities
- (d) Net Cash Change

The complete statement for finding out the cash flow from operating activities is started below:

(ii) Indirect method

The indirect method refers to the statement preparation on the basis of working capital. This method is also called the working capital method or net profit approach. To prepare the cash flow statement according to this method.

To ascertain cash from investing and financing activities are similar to direct method. Therefore these steps are not discussed here.

2.17 The Accounting Code No Used in Saving and Credit Co-operative

Organization

Corporative are established under corporative act and in order to make uniformity in the financial transaction there is provision of some accounting code no. It make easy to check accounting system and make able to easily at the time of transfer of

accountant. For that these is a provision of accounting code no from 10 to 170. The following details more clarify about different accounting code no.

10: Share capital: Share capital is the amount collected from member by selling the share to them. That share capital may transfer by member to their family member. Share capital is the liabilities so when the selling the share capital liability will increase and will be credited and while returning share capital it will be debited.

20: Fund: In it capital funds, provision funds, depreciation fund, loan fund and other fund are managed. In other fund share premium, provision capital, education development, baddeb, loss recover, women development and farmer bonus are kept:

20.1 Provision Fund: In this fund Co-operative organization use to make provision i.e.

20.1.1 General Provision Fund: In this fund Provision is made for general purpose.

20.1.2 Capital Provision Fund: In this fund 25% of net saving is made.

20.2 Other funds: Especially this fund is established to distribute share bonus to the shareholders out of this funds provided educational scholarship, sports development.

20.3 Loan risk provision funds: In this fund amount is made provision for expired loan for that: Date expire by more than 1 year = 100%

Date expire by 6 month to 1 year = 50%

Date expire by upto 6 month = 25%

For non- expired loan + 1%

This provision is made for deducting the risk of loss due to bad debt in future.

20.3: Non-distributed net saving: for special economy activities this provision is made from the net saving of respective year.

30: Member saving: According to corporative act 2048. The provision is made for to established saving funds of member. In this section account is maintained for each member.

40: Loan taking: In this heading the loan taken by corporative from member banks and other parties is made record. According to the objectives loan it may be classified in agriculture, industry, trade etc.

50: Grant related: The grant provided by the government of Nepal in terms of store construction, building construction, vechale purchase, etc. to the Co-operative is being recorded in this section.

60: Payment payable: The amount payable to firm a industry for credit purchase advanced taken from other, employees provident fund.

70: Other payable: In this heading those transaction except which are recorded in heading 60 are recorded.

80: Cash: In this heading account is made for cash transaction cash balance as well as petty cash fund both is recorded.

90: Bank: The transaction made by co-operative through bank is being recorded in it. only current account are open in this section but saving account is not considered open the current account in two or more than two bank their can further classify as below:

90.1 Rastriya Banijya bank:

90.2 Agriculture development bank:

90.3 Bank of Kathmandu Ltd.:

90.4 Nepal Bank Limited.:

100: Investment: The stock share purchase by corporative and the amount deposited by corporative and the amount deposited by corporative in the bank and saving and fixed deposit account.

110: Loan provided to the member: The loan provided by the corporative to the member is being recorded in this section. the loan have to divided into following i.e. Agriculture loan, Industry wan, service loan and trade loan. In another way loan can further classify as: Date expired and date none expired.

120: Record of receivable: In it the transaction related with credit sales and amount collected, Advanced given and cleared, outstanding interest in investment, the shortage of weight and value in the transaction made by employee. The

amount of misuse by employee, the deposit amount made by corporative in other organization while getting services i.e. telecom, electricity etc.

130: Assets: The record of following assets is made in it they are furniture vehicle, land and building.

140: Other assets: Except the assets falls under section 130, other assets are recorded in this section such as: losing stock, Net loss, computer, Telephone, Fax, Photocopy, sign board {except flex print}, pump lets, Gas slender, refuel, printer, Radio, T.V., Noticed board, battery, etc.

Goods purchase and expenses account

150.1 goods purchase: The goods purchase by corporative for resale purpose is recorded in this sector. In it which method of inventory {life/fifo} is adopted wshpuld considered.

150.2 Carriage: The cost incurred for the carriage of goods is recorded in it. The cost of carriage is added in the price of good so it is separately recorded.

150.3 Salary and T.A.D.A.: The salary, allowance, overtime pay paid to employee is recorded in it.

150.4 Rent paid for house and warehouse: The paid for house to run business and to store inventory is recorded in it. The cost paid by corporative to provide housing facility employee also recorded in it. If these is provision is tax in rent that have deduct and paid to land lord.

150.5: Purchase of office supplies: The office supplies purchase by corporative like: paper, ink pen, stamp, printing expenses, postal expenses, battery, carpet, towel, doormat, candle etc.

150.6 Repair and maintenance expenses: The expenses incurred fir the repair and maintenance of the assets is recorded in this section.

150.7 Current interest expenses: The interest payable to saving made by member to loan taken by corporative is recorded in it.

150.8 Miscellaneous expenses: The following expenses are recorded in it; they are expenses for general meeting, Audit fee, tea with snakes, (Tiffin exps) training expenses, provision made for risky loan, loss incurred in assets, the amount of loss incurred in sold goods.

150.9 Depreciation: The depreciation should be charge in the assets. Rate of depreciation is according is according to the provision made by law. The rate of depreciation of building is 2.5-6%, vehicle, 15% other 20% and if life is given then should be charged accordingly.

150.10 Fuel: the amount paid for fuel like petrol, diesel, kerosene, Gas, to run office, factory, vehicle etc. are recorded in it. Fuel expenses paid for factory is direct expenses and paid for office is indirect expenses.

15.11 Meeting allowance: The allowance is paid for the meeting of board of director. Account committee, saving committee, price determination committee is recorded in it.

150.12 Production expenses: The cost incurred for processing and production of goods is recorded in this section.

150.13: Trade discount: The discount provided for whole sale purchase is recorded in this section.

150.14 Telephone, electricity and drinking water charges: The amount paid by corporative for telephone charges, electricity charges, drinking water charges are recorded in it.

150.15 Employee dress: The dress provided by corporative to employee and that cost is recorded in it.

150.16 Examination conducting expenses: The amount paid for conducting different exam is recorded in this section.

150.17 Animal feeding and medicine: For the farming animal and poultry different cost incurred for feeding and medicine that is recorded in it.

150.18 Insurance payment: The insurance charge paid by corporative to insurance company for the insurance of property of corporative is recorded in it.

Sales and income account:

160.1 Goods sold account: The amount get for selling goods and services is recorded in it.

160.2 Interest receives in loan: The amount of interest taken from providing to member Rs other loan is recorded in it.

160.3 Interest in investment: The bonus takes in investing share, interest in debenture, interest in saving are recorded in it.

160.4 Miscellaneous Income: The amount taken in business transaction is recorded in it.

160.5 Trade discount receives: The discount and commission receive by corporative for purchasing goods is recorded in it.

160.6 Administrative Grant receives: The grant receives from donor institution is recorded in it.

160.7 Admission and monthly fee: The amount gets by corporative from school, training program.

160.8 Exam fee and library charges: The amount taken corporative educational institution for exam fee and library charges is

160.9 Hostel charges: The charge taken corporative school for hostel facility is recorded in this section.

160.1 T.S. commission: The amount taken by daily corporative for collecting and selling milk get commission for carriage and supplies, that is recorded in it.

160.11 Insurance charge receive: The amount taken insurance from member is recorded in it.

170: Income statement and allocation of net saving:

170.1 Trading account: Detail explain is given in next section.

Sources: Co-operative Accounting System, 2067:19

2.18 The Major four Account Maintained by saving and Credit Co-operative

2.18.1 Assets Register

Table 2.1
Assets Register

Date	Voucher No.	Particular	Cash			Bank			Investment			Fixed Assets		
			Dr.	Cr.	Balance	Dr.	Cr.	Balance	Dr.	Cr.	Balance	Dr.	Cr.	Balance

Source : Co-operative Account System, 2063:27

2.18.2 Capital and Liabilities Register

Table 2.2
Capital and Liabilities Register

Date	Voucher No.	Particular	Share			Provision Fund			Miscellaneous Fund			Deposit			Loan			Outstanding Payment.		
			Dr.	Cr.	Balance	Dr.	Cr.	Balance	Dr.	Cr.	Balance	Dr.	Cr.	Balance	Dr.	Cr.	Balance	Dr.	Cr.	Balance

Source : Co-operative Account System, 2063:29

2.18.3 Income Register

Table 2.3
Income Register

Date	Voucher No.	Particulars	Interest from Investment	Int. From Bank A/C	Application Fee	Membership Renewal	Total

Source : Co-operative Account System, 2063: 30

2.18.4 Expenditure Register

Table 2.4
Expenditure Register

Date	Voucher No.	Particular	Salary	Rant	Supplies	Int. on won.	Meeting Expenses	General Meeting	Interest Discount	Total

Source : Co-operative Account System, 2063: 31

2.19 Review of Related Thesis

Sufficient researchers in the area of accounting standards in Nepalese corporate companies have not been made. A few researchers have been conducted in the area of accounting practice in Nepal. As accounting is the foundation to accounting standards, researcher made on these areas have been taken in to consideration for the sake of review to examine what and how accounting practice is done in Nepal.

An attempt has made here to review some of researchers, which have been conducted in the periphery of accounting in the context of Nepal.

Sharma Gokul Raj had done research "Financial Analysis of Samjhana Multiple Co-operative Society Ltd. (SMCL) and Naba Kshitiz Co-operative Society Ltd. (NBCSL) (1997).

Adhikari Ramji Prasad has conducted research on "Accounting Practices of Small and Cottage Industries" in Nawalparasi and Chitwan. He has studied about the accounting tools used in practice. He has compared in sector wise as well as non-sector wise. The research has based on primary data. The study observes on Journal, Ledger, Trial balance, Subsidiary book, Final Account (1998). The major finding of this thesis are :

- (i) Many small businesses however not always use the complete books keeping cycle and use a single entry book keeping system instead of the double entry system of journals and ledgers.
- (ii) They use a cash register because most of their transaction are recorded as cash basis, this means, they don't record the income until the cash is received expenses don't record until the actual cash pay out.
- (iii) Many small business firms prefer less detailed records, though less accurate, to save the expenses of a double entry system.
- (iv) Many small businesses don't prepare profit and loss account and balance sheet because they record of incomplete less detailed information.

Sharma, Sagar had conducted a research in the topic 'Management Accounting Practices in the Listed Companies of Nepal.' It is a survey study concentrated on examining the present practice of management accounting tools in the listed companies of Nepal and identifying the area where management accounting tools could be applied to strengthen the company. The research was concerned with management accounting. It did not consider the overall accounting practice of enterprise. All the data of the research were obtained through primary sources (2002).

Neupane, B.P. in his research 'Compliance of IASs in Nepal' has tried to find whether Nepalese corporate Companies with their accounting practices with IASs (2003). He aimed:

- i) To discuss the framework of IAS.
- ii) To find out the methods of accounting followed by different institutions.
- iii) To compare the requirements of IAS with the accounting system followed by these institutions.
- iv) To make recommendations regarding IAS with the accounting system followed by these institutions.

Bhattarai Ishowari Prasad in a dissertation entitled "The Corporate Financial Reporting in Nepal : The effect of change in price level" attempted to examine the current status of price level change accounting practices in Nepal and to point out the major problems of practicing the price level change accounting in Nepal with their reminds. The study was conducted on the basis of survey research. The opinions of experts and partitions had been taken. The study focused on the corporate financial reporting practice in Nepal (2004)

Pandey Devendra Bahadur has conducted research on "Accounting Practices on Small Scale Industries in Nepal." With reference to Chitwan district (2011). The major findings of this thesis are:

- i) Most of the owner likes to keep the accounts themselves due to security.

- ii) Very few firms 30% firm audit their accounts.
- iii) All entrepreneurs are literate.
- iv) Management of the small business mostly depends on the family member's decision some common characteristics observed in small business management.
 - a. Decisions are delayed without understanding problems.
 - b. Most of the decisions are taken by owner based on their hunch and likings.
 - c. No proper planning is setup, due to little knowledge of systematic accounting.
 - d. Due to salary structures and less facilities, employees are less motivated.
 - e. Good communications are not found among the firms environment.
- v) It is observed that owners are not interested to prepare systematic accounts due to Compton of the tax officers.

Lack of awareness, why should we pay tax to the government.

2.20 Research Gap

Review of literature is an essential part of all studies. It is a way to discover what other research in the end of our problem has uncovered. A critical review of literature helps the research through understanding and insights into previous research works that relates the present study. It also avoids investigating problem that has already been definitely answered. Therefore researcher seems to identify these new contributions and add them to the body of knowledge before researcher conducts own investigation.

All the above studies are conducted with the research title "Accounting practices in co-operative organization". Co-operative is one of the major sectors for the economic development of the country. The present government has also given priority on the development of co-operative sector. In order to develop this sector, Co-operative should be well managed. The development of co-operative has been

started from Chitwan in 2013 B.S. as a first co-operative in Nepal. I didn't find any early study about the accounting system being practiced in co-operative organization in Chitwan district. Despite this prefer to choose this topic for research.

The study is expected to complement this need. The study has also made an effort to raise general awareness among Nepalese co-operatives, explore the current issue and contribute to some extent its practice in Nepal.

CHAPTER - THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research is the prime source of knowledge generation, which opens new frontiers of knowledge and provides broader and deeper understanding of phenomena (Van Dalen, 1973, p. 2).

Research methodology is a way to solve the research problem. It is the science of studying how research is done scientifically. Human nature is always curious to learn, study and investigate phenomenon raising the question like – why, when, how, what etc. Research may be done through questionnaire, personal investigation etc.

In other word, research is common parlance to search for knowledge. Advance learner dictionary define the research “a careful investigation or inquiry especially through search for new facts in any branch of knowledge”. It is really a method of critical thinking by defining and re-defining problem, formulating hypothesis or suggested solution collecting, organizing and evaluation data, making deduction and making conclusion to determine whether they fit the formulated hypothesis.

3.2 Research Design

The formidable problem that follows the task of defining the research problem is the preparation of the design of research project, popularly known as the “Research Methodology”. Decision regarding what, where, when, how much, by what mean concerning an inquiry or a research study constitute a research design. “A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy procedure” – *Claire Selltize and Other.*

It is the overall plan of a proposed study to specify the appropriate research methods and produces for obtaining specify finding validity, accuracy and

economically as far as possible. As per the nature of study, survey research design will be followed with descriptive and analytical approach.

3.3 Population and Sample

The total number of registered Co-operative organization in Chitwan District is considered as the total population of this study. But to make simplicity of the study samples will be collected out of them 28 Co-operative organization by applying judgmental sampling method.

S.N.	List of sample Co-operatives	Address	No. of Staffs
1.	Mulakalika Saving & Credit Co-operatives Ltd.	Bharatpur-2	22
2.	Puspanjali Saving & Credit Co-operatives Ltd.	Bharatpur-2	15
3.	Everest Saving & Credit Co-operatives Ltd.	Bharatpur- 4	10
4.	Sowarna Laxmi Saving & Credit Co-operatives Ltd.	Bharatpur-2	35
5.	Sunrise Saving & Credit Co-operatives Ltd.	Bharatpur- 12	12
6.	Karmachari Saving & Credit Co-operatives Ltd.	Bharatpur- 12	10
7.	Mankamana Saving & Credit Co-operatives Ltd.	Bharatpur- 11	16
8.	Deepjyoti Saving & Credit Co-operatives Ltd.	Bharatpur- 11	18
9.	Panas Saving & Credit Co-operatives Ltd.	Bharatpur- 10	8
10.	Crystal Saving & Credit Co-operatives Ltd.	Bharatpur- 10	8
11.	Hans Saving & Credit Co-operatives Ltd.	Bharatpur- 4	16
12.	Dhana Laxmi Saving & Credit Co-operatives Ltd.	Bharatpur- 4	20
13.	Sanakisan krishi Sahakari Saatha.	Sukarnagar-3	6
14.	Jana yeakata Co-operatives Ltd.	Meaguli-8	2
15.	Maheandrashor Co-operatives Ltd	Meaguli-8	3
16.	Sangham Saving Co-operatives Ltd.	Sukarnagar-3	2
17.	Milan Bachata	Sukarnagar-9	2
18.	Jabka kishan Co-operatives Ltd	Sukarnagar-9	3
19.	Amrit Multipurpose Co-operatives Ltd	Sukarnagar-2	3
20.	Hariyali Vnnat krishi utpadak sastha limited.	Gunjangar	2
21.	Ganeshor Taja Tarkari tatha Falful Utpadak sastha	Mangalpur.-5	3

	Limited.		
22.	Kisan kalia Dugdha Utpadak shakati sastha limited.	Phoolbari.-4	3
23.	Bakhan shakari sastha limited.	Shadanagar-5	2
24.	Bararnda Bhar Madyabarti Batach tatha rind sahakari sanstha limited.	Geetanagar-3	2
25.	Surya mukhi tatha maha Utpadak sahakari sanstha limited.	Chinpur-8	2
26.	Shiva nagar bachat tatha ride sharkari sanstha limited.	Shivanagar-5	1
27.	Kisha pragati sahakari sanstha limited.	Geetanagar-6	2
28.	Tribeni Dugdha utpadak sahakari sanstha limited.	Geetanagar-9	4

3.4 Sources of Data

Basically, the data use in this study will be collected from primary sources through observation, interview, questionnaire etc.

3.5 Sampling Method

Sampling is simply the process of learning about population on the basis of a sample drawn from it. It is the selection of some part of an aggregate or totally on the basis of which a judgment or inference about the aggregate or totality is made under this method a small group of the universe is taken as the representative of the whole and the results are drawn. Different types of sampling technique are used for drawing the sample plan. Among them judgmental sampling method has been chosen in this study.

Judgmental sampling assumes that the composition of the total population is known. Generally when the population is heterogeneous with respect to variable or characteristics under study then the techniques of judgmental sampling is used to obtain more sufficient and accurate result. Under this method, total population will be divided into various homogenous groups in such a way that representative sample could be chosen.

3.6 Selection of Sample District

In this study Chitwan district is selected as sample district.

3.7 Method of Data Collection

This study will use primary sources of data. Personal contact, field survey, questionnaire, observation will be the main source of primary data. However, questionnaire and observation will be use in this study. One set of questionnaire will be prepared and distributed to the (represented of Co-operative) secretary of Co-operative to collects to managers and staffs of the Co-operative and the questionnaire distributed by visiting 28 Co-operative origanation in Chitwan district.

3.7.1 Data Analysis Tool

The data obtained from the questionnaire and observation were carefully edited then coded in the standard form.

3.7.2 Formulation and Test of Hypothesis

(A) Chi-Square Test

Under the test of goodness of fit we try to find out how far the observed values of a sample proportion of a given phenomenon are significant different from the expected values. This is done by comparing the desired values of χ^2 from the formula easier with the table values of χ^2 for the required degree of freedom depending on the number of observation and level of 0.05 (normally) unless otherwise stated.

(i) Formulation of the Hypothesis: General procedure of testing hypothesis, which will be applied in this study, is as follows:

a. Formulation of the Hypothesis

Null hypothesis: A statistical hypothesis which is stated for the purpose of possible acceptance is called a null hypothesis and is denoted by H_0 . The null hypothesis formulated in this study are :

Ho: Account keeping system is not dependent of academic background of the book keeper.

Ho: There is no significant difference of accounting pattern between account trainees and non-trainees.

Alternative hypothesis : Any hypothesis, which is complementary to the null hypothesis (Ho), is called an alternative hypothesis and is denoted by H₁.

H₁: There is significant difference of accounting pattern between account trainees and non-trainees.

H₁: Account keeping is dependent of academic background of the book keeper.

b. Computing the Test Statistic: Calculate an appropriate test, which is based on an appropriate probability distribution for testing whether the null hypothesis should be accepted or rejected.

χ^2 will be calculated by using this formula:

$$\chi^2 = \sum (O - E)^2/E$$

Where,

O = Observed frequencies

E = Expected frequencies

To calculate the expected frequencies (E) the following equation will be used:

$$E = RT \times CT/N$$

Where,

RT = the row total for the row containing the cell

CT = the column total for the column containing the cell

N = the total number of observation

c. Decision Rule: Decision will be made by comparing the calculated value of χ^2 with tabulated values of χ^2 .

If calculated $\chi^2 \leq$ the tabulated χ^2 it is not significant and Ho will be accepted. Otherwise, it will be rejected.

CHAPTER - FOUR

PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction

Presentation and analysis of data is an important stage of the research study. The collected raw data transcribed into mathematical and understanding form. The analysis of data consists of organizing data by tabulation and then placing that in presentation form by using figure and table. Basically, this chapter interprets the finding related with accounting aspect.

4.2 Observe Data

4.2.1 The Academic Background of the Staffs

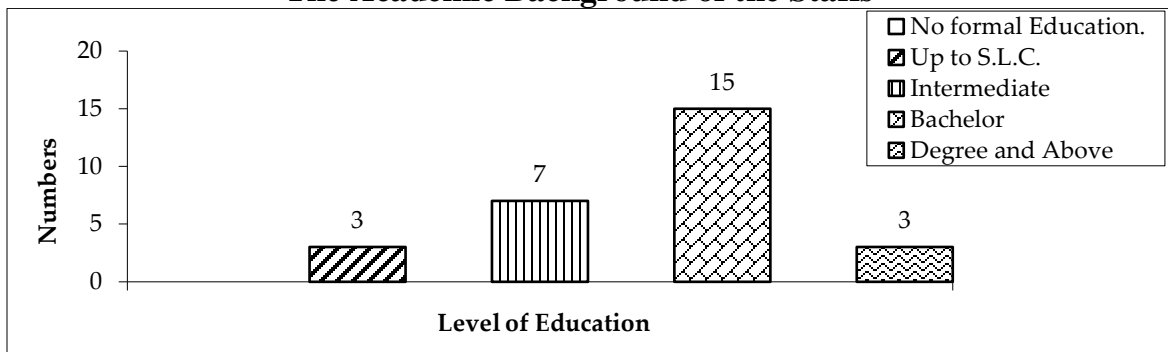
Table 4.1
The Academic Background of the Staffs

Level of Education	Number	Percentage
No formal Education.		
Up to S.L.C.	30	14.5
Intermediate	107	46.5
Bachelor	66	27.4
Degree and Above	28	11.6
Total	232	100

Source: Field Survey, 2012

The above table shows the number of Staff and their qualification. The majority of staff i.e. 46.5% is Intermediate level and there is no one have no formal education.

Figure 4.1
The Academic Background of the Staffs



4.2.2 Book Keeping Personnel

Book-keeping is an act of keeping written records of the financial transactions of business. An owner or an accountant cannot keep in memory all the financial transactions that take place in the business for the whole year. Bookkeeping keeps records of financial transactions systematically in a chronological order for the purpose of future use.

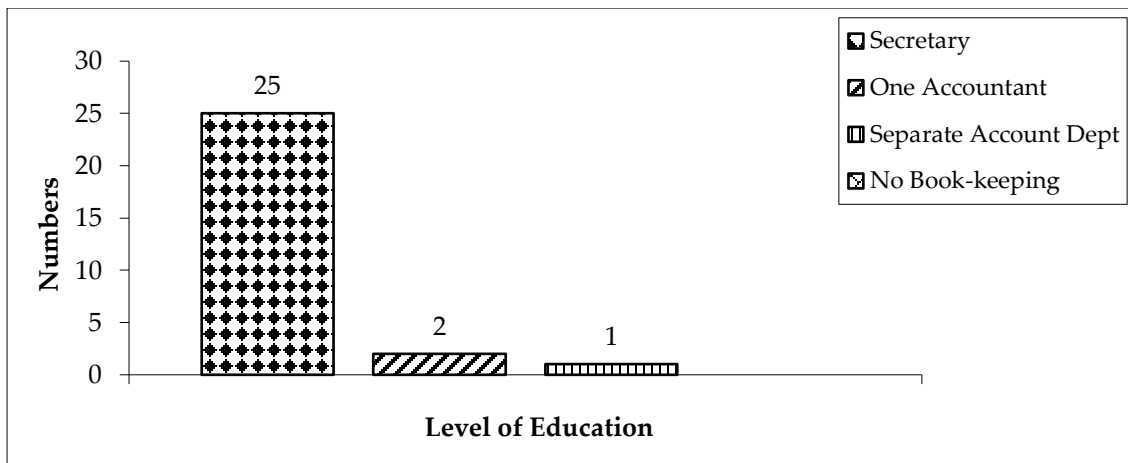
Table 4.2
Book Keeping Personnel

Type	No.	Percentage
Secretary	25	89.28
One Accountant	2	7.14
Separate Account Dept	1	3.57
No Book-keeping		
Total	28	100

Source: Field Survey, 2012

In the major number of co-operative secretary use to maintain book-keeping.

Figure 4.2
Book Keeping Personnel



4.2.3 Accounting Record Maintained by Co-operatives

Table 4.3

Accounting Record Maintained by Co-operatives

Particulars	No.	Percentage
Yes	28	100
No	-	-
Total	28	100

Source: Field Survey, 2012

It is found that all co-operative maintained accounting record.

4.2.4 System of Accounting

The double entry concept arises from the fact that, there cannot be a transaction unless there are two parties to it. Every transaction resulting in transfer of money goods or services must imply existence of at least two parties one the receiver, another giver. The set of records based on this duality is called double entry system of bookkeeping.

There is another method of book keeping also but it does not follow the principle of double entry system of bookkeeping. Under this system, the records are kept but not completely. All other records are completely ignored.

Table 4.4

System of Accounting

Particular	No.	Percentage
Single Entry book-keeping	-	-
Double Entry book-keeping	28	100
Total	28	100

Source: Field Survey, 2012

According to sample study it found that, all the co-operative organization under double entry book-keeping system.

4.2.5 Mode of Purchase of Fixed Assets

Table 4.5

Mode of Purchase of Fixed Assets

Particular	No.	Percentage
In Cash	28	100
Under Hire purchase	-	-
Total	28	100

Source: Field Survey, 2012

All co-operative has been purchase assets under cash basis and there is no system of trying the assets. Urban areas Co-operative organization, fixed assets purchase in cash. In this organization long times used in fixed assets are purchases in cash and short period used in fixed assets are purchases in under hire purchase system.

4.2.6 Application of the Method of Segregating Cost in to Fixed, Variable and Semi-Variable.

We can classify cost into three main parts if we classify cost based on the relationship existing between cost and activity volume (such as: production units, machine hours used etc.)

- i) Variable cost: variable cost has a direct relationship with the volume of activity in other words, if production goes up by 10 percentage the total cost will also go up by 10% and vice-versa in other words the cost per unit will remain always same or constant although the production is increasing or decreasing.
- ii) Fixed cost: in total, the cost remains constant up to a certain volume of activity if the company produces more than this certain increase but not direct proportion to increase in production units.
- iii) Semi- variable cost: semi- variable cost is also known as mixed cost because this cost includes both variable cost and fixed cost.

Table 4.6

Application of Method of Segregation of Cost

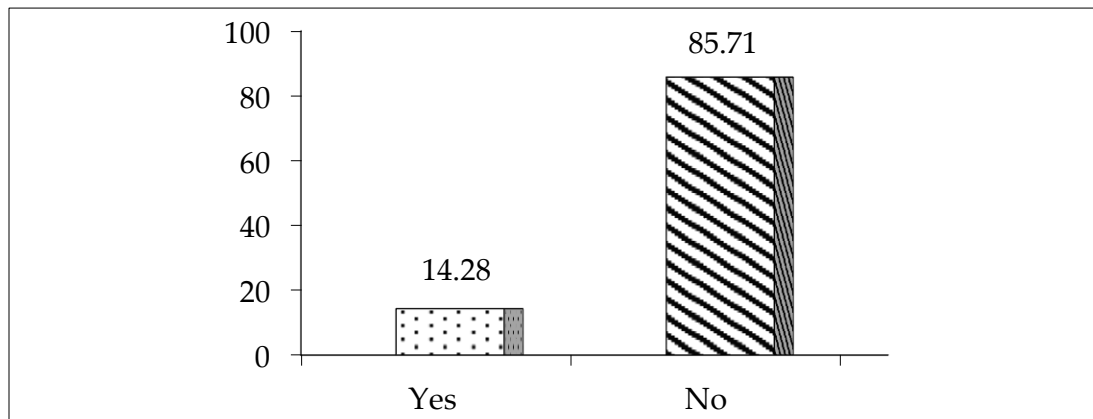
Particular	No.	Percentage
Yes	4	14.28
No	24	85.71
Total	28	100

Source: Field Survey, 2012

Most of the co-operative don't segregate the cost in fixed and variable. They only record the cost incurred in practice. Generally most of the book-keeper have knowledge about segregation of cost but they don't apply in practice.

Figure 4.3

Application of Method of Segregation of Cost



4.2.7 Nature of Maintaining Final Account

Final accounts are the result of the whole accreting or cycle, here are therefore, prepared as the final step in the accounting process at the end of a financial period. The final accounts of a business include trading accounts, profit and loss account and the balance sheet these final accounts results and financial position of the business.

Table 4.7
Nature of Maintaining Final Account

Particular	No.	Percentage
1. Four account - Assets Register - Capital and Liabilities Register - Income Register - Expenditure Register	28	100
2. Periodical trial balance profit and loss a/c with or without trial balance.		
3. No proper Account	-	-
Total	28	100

Source: Field Survey, 2012

All the co-operative are maintained four Account provision made by co-operative act i.e. Assets Register, Capital and Liabilities Register, Income Register and Expenditure Register

4.2.8 Method of Charging Depreciation

Fixed installment method under this method of fixed percentage of the original value of the set is written off every year so as to reduce the assets accounts to will or to its scrap value at the end of the estimated life of the assets.

Diminishing balance method: under this method, depreciation is calculated at a certain percentage each year on the balance of the asset which is brought forward from the previous year. The amount of depreciation changed in each year is not fixed but it goes on decreasing gradually as the beginning balance of the asset in each in each year will reduce. The charges in initial year are higher than those in the later year.

Table 4.8
Method of Charging Depreciation

Particular	No.	Percentage
Fixed installment Method	-	-
Diminishing Balance Method	28	100
Total	28	100

Source: Field Survey, 2012

All the co-operative use to charge depreciation under diminishing balance method.

4.2.9 Application of Cost Reduction Technique

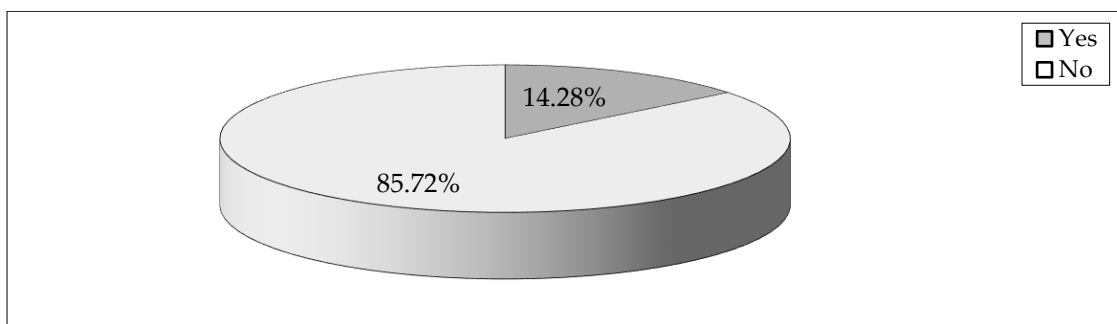
Cost reduction is different from cost control. Cost control the achievement of real and permanent reduction in the unit cost of goods manufactured or services is rendered without impairing their suitability for the product cost control is achieved by setting targets of performance collecting actual with target and submitting prompt reports to top management showing deviation from target it is a continuous process. Again, cost reduction is a corrective function whereas cost controlling is a preventive function.

Table 4.9
Application of Cost Reduction Technique

Particular	No.	Percentage
Yes	4	14.28
No	24	85.7
Total	28	100

Source: Field Survey, 2012

Figure 4.4: Application of Cost Reduction Technique



4.2.10 Feeling of Satisfaction with Existing Accounting System

Table 4.10

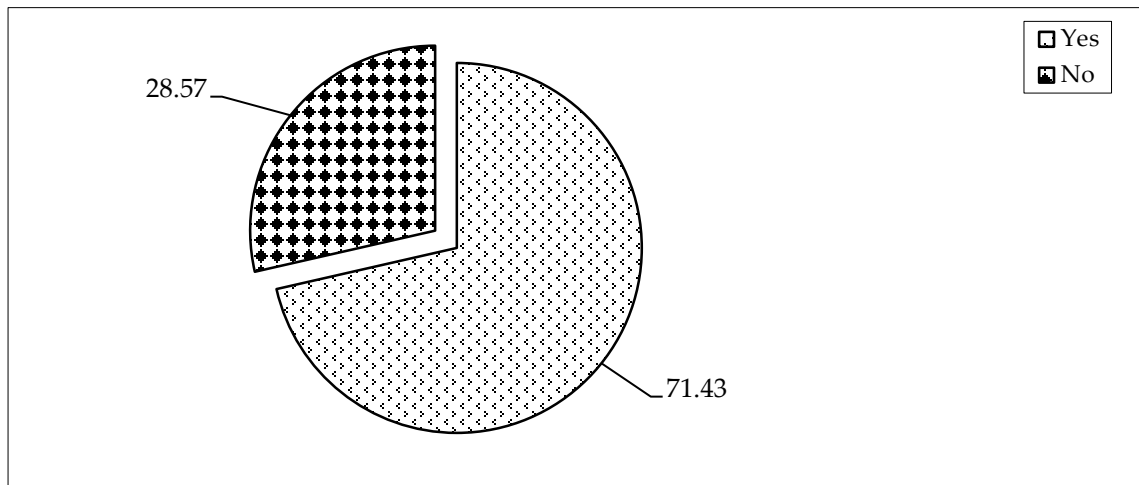
Feeling of Satisfaction with Existing Accounting System

Particular	No.	Percentage
Yes	20	71.43
No	-	-
Partly	8	28.57
Total	28	100

Source: Field Survey, 2012

Figure 4.5

Feeling of Satisfaction with Existing Accounting System



Most of the co-operative are satisfied with present accounting system which they use to maintain.

4.2.11 Mode of Economic Transaction

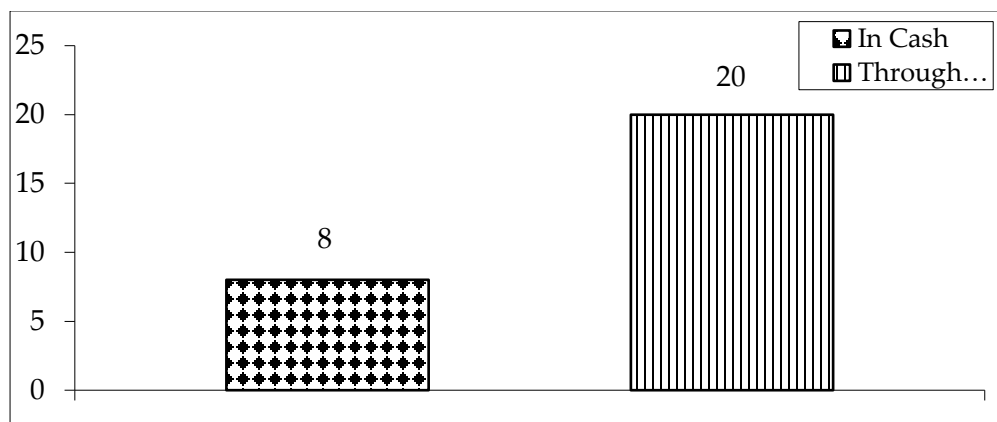
In Nepalese context cash transaction is very used because people especially for the poor of the society. In urban areas of co-operative organization through bank. After the democracy most of the co-operative organizations are used their economic transaction through bank.

Table 4.11
Mode of Economic Transaction

Particular	No.	Percentage
In Cash	8	28.57
Through Bank	20	71.43
Total	28	100

Source: Field Survey, 2012

Figure 4.6
Mode of Economic Transaction



Most of the co-operative do their economic transaction through banks which is 71.43% of sample size.

4.2.12 Sources of Finance

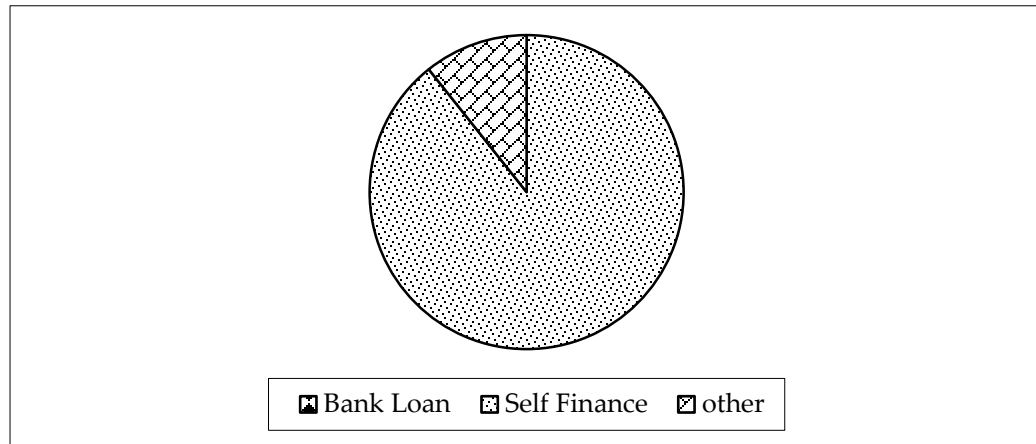
Table 4.12
Sources of Finance

Particular	No.	%
Bank Loan	-	-
Self Finance	25	89.28
Other	3	10.71
Total	28	100

Source: Field Survey, 2012

The major sources of finance of co-operatives organization is equity capital.

Figure 4.7
Sources of Finance



4.2.13 Auditing

Auditing is important work of accounting year. It is regularly work of end of year. Auditing is a systematic examination of the books and record of a business or other organization in order to ascertain or verify, and to report upon the facts regarding its financial operations and the result there of

It has more advantages to detection and prevention of errors and fronds, to keep account regularly, to get compensation to obtain loan, facilities to the sale of business, to assets tax to get information about profit or loss etc.

It is a examination of such records to prepare business profit or loss and balance sheet in company act.

It is two objectives one is primary objective other is secondary objectives.

Table 4.13
Auditing

Particular	No.	Percentage
Yes	28	100
No	-	-
Total	28	100

Source: Field Survey, 2012

All the co-operatives audited the account by authorized auditor. All the co-operative had provided the audit report to observe during the research period study.

4.2.14 Effectiveness of Account of System after Training

Table 4.14

Effectiveness of Account of System after Training

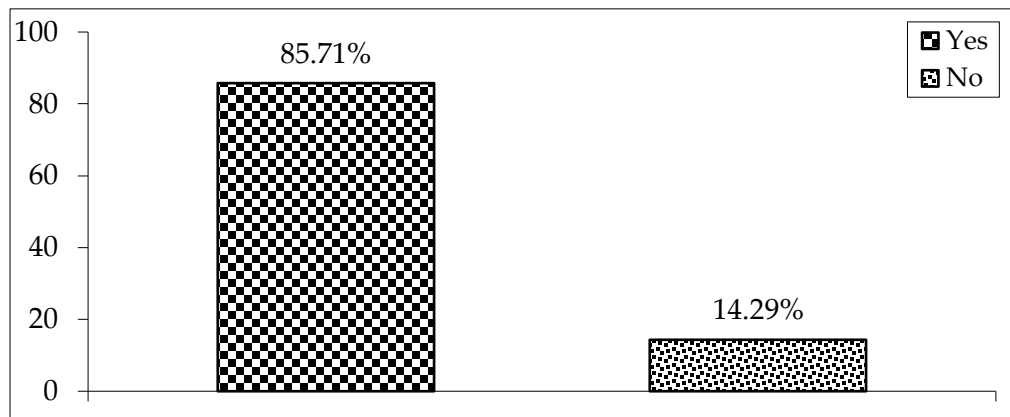
Particular	No.	Percentage
Yes	24	85.71
No	4	14.29
Total	28	100

Source: Field Survey, 2012

According to above data it is found that training is effective for the improvement in the accounting system.

Figure No. 4.8

Effectiveness of Account of System after Training



4.2.15 Usefulness of Accounting Training

Table 4.15

Usefulness of Accounting Training

Particular	No.	Percentage
Very Useful	18	64.29
Useful	10	35.71
Less useful	-	-
Total	28	100

Source: Field Survey, 2012

Book-keepers feel the very usefulness of accounting training. At the time of responding, they told that they are also agree to bear the cost of training themselves too. Hence it is to that training is very much essential. It is very effectiveness to work performance. Training staffs help the cost reductions.

4.2.16 Mode of Maintaining Accounts

Table 4.16

Mode of Maintaining Accounts

Type	No.	Percentage
Computerized	5	17.86
Manually	23	82.14
Total	28	100

Source: Field Survey, 2012

Basically, Co-operative related with Agriculture, Farming and Mahila bachat tatha Ride Shakari Sastha maintained book of account manually. But, the financial Co-operative use to maintain account manually as well as in computerized form.

4.2.17 Closing of Account

Table 4.17

Closing of Account

Particular	No.	Percentage
Monthly	1	3.57
Quarterly	-	-
Half yearly	3	10.71
Annually	24	85.71
Total	28	100

Source: Field Survey, 2012

Mostly co-operative organization closes their account annually, which is 85.71% of sample size. Besides that from of the Co-operative also closed their account monthly and half yearly.

4.2.18 Accounting Practice between Account Trainee and Non-Trainee

(i) **Null Hypothesis (H₀):** This is no significant difference in accounting practice between account trainees and non-trainees.

(ii) **Alternative Hypothesis (H₁):** This is significant difference in accounting practice between account trainees and non-trainees.

Test Statistic under H₀ is

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Where,

O = Observed frequency

E = Expected frequency = $\frac{RT \times CT}{N}$

RT = Row total

CT = Column total

N = Grand total

Table 4.18

Table for expected frequency

	Good	Mod.	Poor	Total
Training	10	4	3	17
Non-Training	2	2	7	11
Total	12	6	10	28

According to appendix:

$$\chi^2 = \sum \frac{(O-E)^2}{E} = 6.6095$$

$$\text{Degree of freedom} = (r - 1) (c - 1) = (2 - 1) (3 - 1) = 2$$

Tabulated value of χ^2 at 0.05 level of significance for 2 d. f. is 5.99.

Decision: Since the calculated value of $\chi^2 = 6.6095$ is greater than its tabulated value 5.99, null hypothesis is rejected and alternative hypothesis is accepted i.e. there is significance difference in accounting pattern between account trainees and non-trainees.

4.2.19 Training Educational Background and Thesis Rating of Accounting System

Table 4.19

Training Educational Background and Thesis Rating of Accounting System

Present Accounting System	Good	Mod.	Poor	Total
Educational Background				
Upto Intermediate	60	45	35	140
Upto Master Degree	12	18	30	60
Total	72	63	65	200

Justification of Data with the test of Hypothesis

1. a) Null Hypothesis H_0 : Account keeping system is not dependent of academic background of the book keeper.

b) Alternative hypothesis H₁: Account keeping is dependent of academic background of the book keeper.

Test Statistic under H₀ is

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Where,

O = Observed frequency

E = Expected frequency = $\frac{RT \times CT}{N}$

RT = Row total

CT = Column total

N = Grand total

According to appendix:

$$\chi^2 = \sum \frac{(O-E)^2}{E} = 14.2334$$

Degree of freedom = (r - 1) (c - 1)

= (2 - 1) (3 - 1)

= 2

Tabulated value of χ^2 at 0.05 level of significance for 2 degree of freedom is 5.99

Decision: Since the calculated value of $\chi^2 = 14.2334$ is less than its tabulated value 5.99, null hypothesis is rejected and alternative hypothesis is accepted. That is account keeping system is depending of academic background of the book keeper.

4.3 Major Finding of the Study

- (i) All the Co-operative maintained account, but mostly account is maintained manually and some other maintained in manual as well as in computer.
- (ii) Mostly secretary keeps the record of accounts.
- (iii) All the Co-operatives keep the record of transaction under double entry book-keeping system.

- (iv) Accounts are closed on a annual basis.
- (v) All Co-operative keep record of transaction on cash basis.
- (vi) The payment and receipt are made in cash as well as through bank.
- (vii) Different types of training and development programs are organized for quality development of employee.
- (viii) Partially, some of the Co-operatives use to prepare budget but mostly they don't.
- (ix) All the Co-operatives audited their account.
- (x) All the Co-operatives prepared 'four account' provision made by the central department of Co-operative.
- (xi) Accounting problems regarding manually recorded accounts.
 - a) Lack of qualified and experienced accountants.
 - b) No proper knowledge about calculating depreciation.
 - c) Confusion regarding contra entry for various transactions.
- xii) Accounting problem regarding computerized accounts system
 - a) Unavailability of account software
 - b) Heavy initial cost
 - c) Little knowledge about computerized accounting system
 - d) Lack of management supporting to maintaining account.
- xiii) User's view of double entry system are as follows :
 - a) Double entry system helps to keep the recode of both personal as well as impersonal monetary transaction of the business.
 - b) Double entry system helps to know the amount of debtors and creditors.
 - c) Double entry book keeping system helps to prepare trial balance for checking arithmetic accuracy of the record of transactions and shows the errors, if any.
 - d) Double entry book keeping system provides accounting information to the management/owner/partners to make decision.

- e) Double entry system helps to know the operation result i.e. profit and loss account, income statement etc.
 - f) Double entry book keeping systems help to prepare the balance sheet to know the financial position of the business.
- xiv) Basically Co-operative organization is using two methods for the calculation of depreciation i.e. Straight Line Method and Diminishing Balance Method.

CHAPTER - FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

This study is intended to focus on accounting system used by Co-operative organizations. It also attempts to identify the accounting problems and gives appropriate accounting model for them. It is not easy to study the all Co-operatives of Chitwan district. So, the study is based on the sample of 28 different Co-operatives, which have been chosen by using Judgmental sampling method. For data analysis χ^2 test is applied to test the hypothesis.

In the course of the study it is found that level of accounting system being practiced in Co-operative organization is quite satisfactory in some respect. But, still they are suffering from different accounting problems. Four-account systems which they have been using are quite traditional. There is confusion towards the accounting code numbers which they using. But there is homogeneity in the book of account and which helps to the act of auditing. Besides that there are some limitations in maintaining record of transaction because of the expansion of operation area.

There is partiality in the mode of payment and receipt through bank and in cash but, they are found to prefer to do in cash. Some Co-operatives also prepare budget. Most of them close their account monthly and prepare report on an annual basis. All the Co-operatives have their account audited annually.

5.2 Conclusion

After the entire research work it is found that, accounting practice of different Co-operative organizations are almost same as per the provision of Co-operative regulation. The research work has tried to ascertain the impact of accounting training package on the accounting performance and the relation between the books of account and the qualification of book keepers. More over, it is found that different Co-operatives have been using other accounting tools as per their

requirement. Mostly, records are being maintained manually but some of them used computer also. It is found that Co-operative organizations have audited the book of accounts and reported within the stipulated time. Annual general meeting is found to have been organized as per the provision. At last, it can be concluded that accounting practices of Co-operative organizations is satisfactory.

5.3 Recommendations

On the basis of entire research study and analysis the following points are recommended which may help for the improvement of account keeping system of Co-operative organizations :

- i) Some book-keepers are from non-management sector and haven't participated accounting training. So, they feel difficulties in keeping record. For that, in order to increase effectiveness and efficiency training should be provided.
- ii) There is partiality in the cash transactions of Co-operative in terms of cash and through bank. So, it is recommended to make all cash transactions through bank.
- iii) According to study, Co-operatives haven't applied the cost reduction technique and it is difficult to compete in the present competitive market without adopting proper cost reduction technique. Therefore, appropriate cost reduction technique should be developed and followed by Co-operatives.
- iv) In Co-operative accounting system, they have their own accounting code number given to respective transaction. If the size and volume of transactions are increased the code numbers should be re-arranged.
- v) The Co-operative organizations have been preparing four account system i.e. Assets Register, Capital and Liabilities, Income Registers and Expenditure Register which is insufficient. Therefore, they should be re-arranged about the provision of for account.
- vi) Most of the, Co-operative have manually maintained book of account. It is recommended to maintained account of both in manual and computer.
- vii) Some of the Co-operative have prepared budget. But, majority of them haven't prepared. Therefore, it is recommended to prepare the budget.

- viii) According to the study it is found that some of the bookkeeper hasn't found knowledge of double entry book keeping system. Therefore, proper knowledge of double entry system should be given to book-keepers and accountants.
- ix) It is recommended to the Co-operative organization for the application of capital budgeting technique for the evaluation of new investment.
- x) Excellent accounting system is the backbone of any organizations, therefore that the organizations should make reliable, fast and transparent accounting system.
- xi) It is recommended that, the Co-operatives should analyze the strength, weakness, opportunities and threat (SWOT) of present accounting system. SWOT analysis can help to develop appropriate accounting system.
- xii) Management accounting tools are not being sufficiently practised by Co-operative organization. It is recommended that management accounting tools should be practiced by them in the preparation of plans, policies and to make decision.
- xiii) There are many problems in the software operation due to lack of proper knowledge about computer. Therefore according to the need, the Co-operative organizations should have trained their computer operators.

BIBLIOGRAPHY

Books

- Bajracharya B.C., Pushkar, Ojha K. P., Goet J., Sharma S. (2005). *Managerial Accounting (2nd ed.)*. Kathmandu: Asmita Books Publishers and Distributors.
- Bajracharya B.C. . (2061) . Business Statistic. Kathmandu: M.K. Publishers and Distributors.
- Bhattacharya, S.K and Deardon, J. (1997) New Delhi. *Accounting for Management*. Vikash Publishing House Pvt, Ltd.
- Dangol, R.M. (2010). Accounts of financial analysis and Planning. Katkmandu:Talaju Prakashan.
- Freeman M. H., Hana J. M., Jhan G., (1958). *Book keeping and Accounting USA* : Gregy Publishing Divisions.
- Jain, S.P & Narayan K.L. *Cost Accounting*. (1991) New Delhi : Kalayani Publishers.
- Joshi P.R. (2001). *Research Methodology*, First Addition, Kathmandu : Buddha Academic Publishers.
- Juneja C.M., Chawala, R.C & Saksena, K.K. (1991), *Double Entry Book Keeping*. New Delhi : Kalyani Publisher.
- Khan, M.Y. and Jain, P.K, "*Financial Management*", New Delhi: Tata Mc Graw Hill Co. Ltd.
- Kothari, C.R., (1990). *Research Methodology Method & Technique*. New Delhi : Willey Eastern Limited.
- Murthy, M.N. (1976), *Sampling Theory and Methods*. Calcutta : Statistical Publishing Society.
- Pandey, I.M. (1999) "*Financial Management*", New Delhi: Vikas Publishing House Pvt. Ltd.
- Shrestha R.P. (2001). *Elementary of Accounting*. Kathmandu.

Journal

- Agrawal, G. R. (1996). *Management for Small Business*. CEDA Auditors Generals Office, Manual of Accounting Government of Nepal.
- Dahal P.C., (1972). *An Overview of Co-operative Organization in Nepal*. FNCCI., *Manual on Double Entry Book Keeping for Entrepreneurs*, FNCCI, Kathmandu.
- Giri, T.P., *An Introduction to Accountancy*. Kathmandu: INAP Press. *Industrial Policy 2008* Ministry of Industry HMG.
- National Planning Commission Eight, Ninth, Tenth, Eleventh, Enterium Plan Document.
- Neupane, B.P. (2003). Compliance of IASs in Nepal' has tried to find whether Nepalese corporate Companies with their accounting practices with IASs.
- Sharma G. R. (1997). *Financial Analysis of Samjhana Multiple Co-operative Society Ltd. (SMCL) and Naba Kshitiz Co-operative Society Ltd. (NBCSL)*
- T.N. Hajela, (1974). *Co-operative Organization in Nepal*.

Unpublished Thesis

- Adhikari, R. P. (1998). *Accounting Practices of Small and Cottage Industries*. An Unpublished Thesis, Balkumari College, TU, Chitwan.
- Aryal, B. (1992). *Entrepreneurship Development Programs in Nepal with Reference to SBPP*. MBA Thesis.
- Pandey D.B. (2011). *Accounting Practices on Small Scale Industries in Nepal*. With reference to Chitwan district. An Unpublished Thesis, Balkumari College, TU, Chitwan.
- Sharma, Sagar (2.002). *Management Accounting Practices in the Listed Companies of Nepal*. An Unpublished Thesis, Central Department of Management, TU, Kathmandu.

Appendix - I

Dear Sir,

It is the golden opportunity on meeting you during the research study on "Accounting Practices of Co-operative Organization". I have selected you as a respondent hoping that you will share valuable ideas and provide information with suggestions to me.

I would like to inform you that the information provides by you will be kept confidential and will not be published, without your permission.

Researcher

Krishna Prasad Adhikari

MBS

Birendra Multiple Campus

Bharatpur, Chitwan

Questionnaire

A Study on Accounting Practices of Co-operative Organization

1. Introduction:
 - a. Name of the co-operative
 - b. Location:
 - c. Date of establishment
 - d. Name of
 - e. Sex: (i) Male () (ii) Female ()
 - f. Age:
 - g. Education:
 - h. Total capital investment
 - Fixed capital = Rs
 - Working capitals = Rs
 - Total capital =
 - i. Sources of capital:
 - Share capital = Rs
 - Debt/borrowing = Rs
 - Total capital =
 - j. No. of employees:
 - Male :
 - Female :
2. Are there accounting record maintained in your co-operative?
 - a. Yes () b. No. ()
3. Who maintains book of accounting in your co-operative?
 - a. Secretary () b. Accountant ()
 - c. Share holder () d. General employee ()
4. Which accounting system does co-operative use?
 - a. Single entry book keeping system ()

- b. double entry book keeping system ()
5. How account is maintained?
 a. Manually () b. computerized ()
6. Are there monitoring the account from top level?
 a. Yes () b. No ()
7. how account are closed?
 a. Monthly () b. Quarterly ()
 c. Half yearly () d. Annually ()
8. What is the basis of maintaining accounts in your Co-operative?
 a. Accrual Basis () b. Cash basis ()
9. Are you satisfied with present accounting system?
 a. Yes () b. Partly () c. No ()
10. How the economics transaction are made?
 a. In cash () b. Through bank ()
11. Is there provision of depreciation?
 a. Yes () b. No ()
12. If yes method you apply?
 a. Fixed installment () b. Diminishing Balance method ()
13. How do you purchase fixed assets?
 a. In cash () b. diminishing Balance method ()
14. The major problems faced for (Record keeping accounting)
 a.
 b.
 c.
15. Is there accounting system effective and sufficient?
 a. Yes () b. No ()
16. Is present accounting system effective provide sufficient information in decision making?

- a. Yes () b. No ()
17. Is there is provisions of training and monitoring system through district co-operative?
a. Yes () b. No ()
18. What was the method of training?
a. On the job () b. off the job ()
19. Which method of accounting do you prefers to use?
20. Does book keeper help to top level in decision making?
a. Yes () b. No ()
21. How the employ are hired?
a. Permanent () b. Contract () c. Part time ()
22. Is the total cost segregate in fixed and variable?
a. Yes () b. No ()
23. Is there any method adopt for cost reduction?
a. Yes () b. No ()
24. Do you prepare budget?
a. Yes () b. No ()
25. Do you audit the4 account?
a. Yes () b. No ()

Appendix - III

Computation of expected frequencies under null hypothesis and X^2

(R, C)	O	$RT \times CT / N = E$	O-E	$(O-E)^2$	$(O-E)^2 / E$
(1, 1)	10	$17 \times 12 / 28 = 7.29$	2.71	7.3441	1.0074
(1, 2)	4	$17 \times 6 / 28 = 3.64$	0.36	0.1296	0.03560
(1, 3)	3	$17 \times 10 / 28 = 6.07$	-3.07	9.4249	1.5541
(2, 1)	2	$11 \times 12 / 28 = 4.71$	-2.71	7.3441	1.5593
(2, 2)	2	$11 \times 6 / 28 = 2.36$	-0.36	0.1296	0.0549
(2, 3)	7	$11 \times 10 / 28 = 3.93$	3.07	9.4249	2.3982
Total	28				6.6095

Appendix - IV

Computation of expected frequencies under null hypothesis and χ^2

(R, C)	O	$RT \times CT / N = E$	O-E	$(O-E)^2$	$(O-E)^2 / E$
(1, 1)	60	$140 \times 72 / 200 = 50.4$	9.6	92.16	1.8286
(1, 2)	45	$140 \times 63 / 200 = 44.1$	0.9	0.81	0.0184
(1, 3)	35	$140 \times 65 / 200 = 45.5$	-10.5	110.25	2.4231
(2, 1)	12	$60 \times 72 / 200 = 21.6$	-9.6	92.16	4.2667
(2, 2)	18	$60 \times 63 / 200 = 18.9$	-0.9	0.81	0.0428
(2, 3)	30	$60 \times 65 / 200 = 19.5$	10.5	110.25	5.6538
Total	28				14.2334