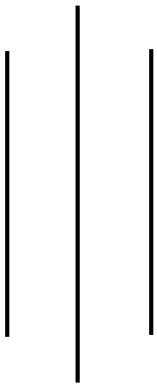
# COST-VOLUME-PROFIT ANALYSIS OF PRINT MEDIA HOUSE

**(Comparative study of The Kantipur Publication and Gorkhapatra Corporation)**

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**A Thesis Submitted to**

Office of the Dean

Faculty of Management

Tribhuvan University

***In the Partial Fulfillment of the requirement for the degree of Master of Business Studies (MBS)***

February, 2013

# RECOMMENDATION

**This is to certify that the Thesis**

*Submitted by:*

**SABITRA DAULIYA**

Entitled

## COST-VOLUME-PROFIT ANALYSIS OF PRINT MEDIA HOUSE

**(Comparative study of The Kantipur Publication and Gorkhapatra Corporation)**

Has been prepared as approved by the Research Department in the prescribed format of faculty of management. This thesis is forward for examination.

| | | |
|---|---|---|
| …….. | ……..……..…. | …… |
| Mr Madhav Prasad Neupane | Dr Sushil Bhakta Mathema | Ms Jyoti Pandey |
| (Supervisor) | (Head of Research Department) | (Campus Chief) |

……..
Mr Surya Devkota
(Supervisor)

Date: ……

# VIVA-VOCE SHEET

We have conducted the viva voce examination of the thesis presented by

**SABITRA DAULIYA**

**Entitled**

**COST-VOLUME-PROFIT ANALYSIS OF PRINT MEDIA HOUSE**

**(Comparative study of The Kantipur Publication and Gorkhapatra Corporation)**

and found the thesis to be the original work of the student written according to the prescribed format. We recommended the thesis to be accepted as partial fulfillment of the requirement for the Master's Degree in Business Studies (MBS.)

**Viva-Voce Committee**

Head of Research Committee …….

Member (Thesis supervisor) .....

Member (Thesis supervisor) .....

Member (External Expert) ……

Date: ……..

# DECLARATION

I hereby declare that the data and work reported in this thesis entitled "**COST-VOLUME-PROFIT ANALYSIS OF PRINT MEDIA HOUSE" (Comparative study of The Kantipur Publication and Gorkhapatra Corporation)** submitted to the office of Dean, Faculty of Management, Tribhuvan University is my authentic work done for the partial fulfillment of the requirement of the degree of Master of Business Studies (M.B.S.) under the guidance and supervision of Mr Madhav Prasad Neupane and Mr Surya Devkota Nepal Commerce Campus Tribhuvan University

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# ACKNOWLEDGEMENTS

The thesis entitled **"COST-VOLUME-PROFIT ANALYSIS OF PRINT MEDIA HOUSE (Comparative study of The Kantipur Publication and Gorkhapatra Corporation)** submitted to the office of Dean, Faculty of Management, Tribhuvan University, The main objectives of the study is "To compare the cost and profit scenario between The Kantipur Publication and Gorkhapatra Corporation" and special objectives are analyze of existing position, breakeven point, profit volume ration margin of safety ratio of the enterprises or houses

I would like to express my sincere graduate to people who helped me in carrying out this study. First, I am very much grateful to Mr. Madhav Prasad Neupane, Former Assistant Campus, Chief Nepal Commerce Campus and Mr Surya Devkota, Lecture Nepal Commerce Campus who supervised me throughout the study, for their inspiration, supervision, regular guidance and generous help for the preparation of this thesis.

My special thanks goes to Associate Professor Sushil Bhakta Mathema, Head of Research Department, Nepal Commerce Campus for providing me to do this research. I am also thankful to all the concerned staff of the The Kantipur Publication and Gorkhapatra Corporation, Department of Information, Press Council Nepal and other organizations, who helped me directly or indirectly by providing necessary data.

Similarly, I would like to express debt of gratitude to my life partner Mr Khagendra Aryal and all of my family members for their continuous inspiration and support during the entire period of the study. At last but not least I cordially would like to express my gratitude to my friends specially Rama, Rakshya, Rashmi, Nita & my loving cousin Bibhusan who directly or indirectly assisted me to prepare this thesis

Moreover, it is needless to say that to err is human and I am also no exception, so I apologize for any errors and mistakes committed in this thesis work

**Sabitra Dauliya**

**Researcher**

# TABLE OF CONTENTS

# LIST OF TABLES



# LIST OF FIGURES

## ABBREVIATIONS USED

| | |
|---|---|
| BEP | : Break Even Point |
| CM | : Contribution Margin |
| CMPU | : Contribution Margin per Unit |
| CV | : Coefficient of Variation |
| CVP | : Cost Volume Profit |
| CVPA | : Cost Volume Profit Analysis |
| DOL | : Degree of Operating Leverage |
| DPAT | : Desired Profit after Tax |
| e.g. | : Example |
| etc | : Etceteras |
| FC | : Fixed Cost |
| FY | : Fiscal year |
| GC | : Gorkhapatra Corporation |
| i.e. | : Thais is |
| KP | : Kantipur Publication |
| Ltd | : Limited |
| MBS | : Masters of Business Studies |
| MoS | : Margin of Safety |
| NG | : Nepal Government |
| PPC | : Profit Planning and Control |
| PVR | : Profit Volume Ratio |
| Pvt. | : Private |
| SD | : Standard Deviation |
| VC | : Variable Costs |
| VCPU | : Variable Cost per Unit |

# CHAPTER-I

# INTRODUCTION

## 1.1 Background of the Study

Cost Volume Profit analysis the variable costing approaches to analyze the build in relationship between cost volume and profit. It makes up use of the principles of marginal costing. The systematic relationship between cost, volume and profit is known as CVP analysis. It is an analytical tool for analyzing the relationship among cost, price, profit, sales and production volume for a relevant range of an activity within a particulars time frame. It is analysis of three variables viz, cost, sales or production volume and profit which explore the relationship existing cost revenue, activity levels and resulting profit. All these terms are interrelated and depended on each other for instance, profit per unit of product depend on its selling price and its cost. The selling prices to a greater extent depend upon the cost and cost depends upon the volume of production.

It is one of the most important and powerful tools that manager have at their command in short term planning. It helps managers understand inter relationship between cost, volume and profit in an organization. A dynamic management therefore uses CVP analysis to predict and evaluate the implication of its short run decision and fixed cost, variable cost, volume and selling profit plans on continuous basis

Cost-Volume-Profit Analysis examines the behavior of total revenues total cost and operation income as changes occur in the output level, the selling price, the variables cost per unit and or fixed cost of a product. *[Horngren Datar and Foster, 2003:15*]

Most of the business fails after a few years sometimes months of starting because they tend to do anything for volume without thinking how it's going to affect the bottom line. CVP Analysis is a management accounting tool to show the relationship between the elements of profit planning. Profit planning is a function of the selling price of product demand, variable costs, fixed costs, taxes etc. The whole picture of profit planning is associated with cost volume profit interrelationships. *[Bajracharya, Ojha, Goet and Sharma, 2005:225]*

Nepal is rich in its geographical, natural, cultural diversity and majestic Himalayas. Nepal is located in between the latitude of 26° 22' North to 30° 27' North and longitude of 80° 4' to 88° 12' East. Nepal is divided into three broad topographies: the mountain region, the hill region, and the terai region. Moving from east to west, the three regions lie parallel as continuous ecological belts, and are bisected by the country's river. Nepal is a relatively small country, measuring roughly 885 kilometers long by 193 kilometers wide, with a total area of 147,181 square kilometers. Situated between two Asian giants countries China and India, Nepal has been characterized as a "yam caught between two rocks". Since it is a landlocked country, Nepal is heavily dependent on India for transit facilities and access to the sea (Bay of Bengal) for delivery of its goods, even those coming from China.[Nepal-Country Environmental Analysis, 2008:1]

## 1.2. Meaning of Media

The term media refers to those responsible for the periodic creation of information and content of its dissemination over which there is editorial responsibility, irrespective of the means and technology use for delivery which are intended on a significant proportion of general public. This could ***interalia*** include print media (newspaper, periodicals) and media disseminated over electric communication networks, such as broadcast media (Radio, Television and other linear audio visual media service).

On line news service (such as online edition of newspaper and newsletter) and non linear audio video media such as on demand Television.

### 1.2.1 History of Nepali Print Media

The institutional history of Nepali press could be traced back to 1851 when Rana Prime Minister Jung Bahadur Rana installed a printing press (The Giddhe Press), or in 1901 when the state-owned newspaper, the Gorkhapatra, was launched, its practical history begins in the 1950s, after the fall of Ranas, when several pioneering journalists took to publishing newspapers in a transitional democracy.

Thirty years after the royal takeover of 1960 represented a repressive press system. During this time, press enjoyed limited rights and lobbied to a multiparty democracy that could not guaranteed the press freedom

After the Restoration of democracy in 1990 a drastic change came in the Nepali Media particularly in the private sector. Liberal provision and guarantee of press freedom enshrined in the constitution opened up avenues for the private sector to involve on media sector. The 1990's democracy yielded by the People's Movement also established rights and freedom of the press. The Constitution of the Kingdom of Nepal (1990) formally guaranteed the freedom of press and publication.

"No news/articles shall be censored, provided that nothing shall prevent the making of laws to impose reasonable restrictions on any act which may undermine the sovereignty and integrity of the Kingdom, or which may jeopardize the harmonious relations subsisting among the peoples of various castes, tribes or communities; or on any act of sedition, defamation, contempt of court or incitement to an offence; or an any act which may be contrary to decent public behaviour or morality". **Constitution of Nepal, 1990**
The registration of newspaper or periodicals shall not cancelled merely for publishing any news item, article or other reading materials (article-13)

### 1.2.2 Profile of the Concerned Organization

**The Kantipur Publication**

Kantipur Publications Private Limited is one of the renowned and leading publication houses of Nepal. It was established in 2047 B.S. First it started to publish "Kantipur Daily" and "The Kathmandu Post" in 7$^{th}$ Falgun 2049 B.S. In the beginning, the publication was under Goyanka but later it was replaced by Gyawali and Sirohiya family. From 2050 B.S. Baisakh 12, kantipur started publishing a four page supplement kosheli with an aim of giving entertainment purely. Since 2052/2/5, Sapatahik was printed on every Friday.
For making the publication well, organized branch offices were established at Biratnagar, Pokhara, Bharatpur and Nepalgunj. The process of distribution and advertisement are well maintained through these offices. At the same time, capable and experienced Journalists are kept in the regional offices for the better coverage of the regions. From eight pages, Kantipur Daily increased to the pages up to 16, but it fluctuates according to time. Due to popularity of saptahik, the 16 pages were increased to 24 pages in 2055/11/7. Publications another progress is "Nepal" a bi-monthly magazine published from 2057/4/15. Publication's latest progress is a woman oriented magazine. From sarbottam to "Sarbotam Nari" that could be found in market in Nepali medium at monthly scheme. All the publications

of kantipur have own types of different news at different headlines for different countries.

**Gorkhapatra Corporation**

The Crown Prince of England Edward VII had a hobby of collecting newspapers of all over the world- while not having any newspaper of Nepal, he enquired about it- Field Marshal Lord Robert visited Kathmandu in 1948 bs - he also explained about Crown Prince's hobby - PM Bir S.JBR managed to publish few copies of Gorkhapatra (gp) in hurry and put it on breakfast table for the special guest Lord Robert - although it is just a saying - no any strong evidence - no one has the copy of those gp - historians of Nepalese journalism late Grishma Bdr. Devkota and Ram Raj Poudyal have mentioned it as a story, not as a history. Regular publication of Gorkhapatra started only in bs 1958 and made a glorious history of one century. Prime Minister Dev S.JBR authorized to Pandit Nardev by a 'sanad' (authorisation paper) to publish gp in 1988 Baisakh badi 11.

During the time of Rana Prime Minister Dev Samsher (JBR), the first publication of newspaper "Gorkhapatra" was published in 1958 B.S. at that time 1000 copies of Gorkhapatra were published. The published remained weekly till 42 years. But since 2003 B.S. Ashwin 29, it was published two times in a week. Since first Poush 2003 B.S. it was published three times in a week & since seventh Falgun 2003 B.S. It has been publishing daily. The publishing institution was introduced as Gorkhapatra for 62 years since establishment time under the Gorkhapatra Sansthan Act 2019 B.S. The institution turned into a Corporation & introduced as a public corporation in 25 Ashad 2020 B.S.

Gorkhapatra Corporation once published "The Nepalese prospective" (weekly English newspaper) but it was dropped out due to the economic reason. The other publication of this corporation are "the rising Nepal" (English daily newspaper from first Poush 2022 B.S.), "Madhupark" (montly literary magazine from Jestha 2025 B.S.) "Sunday dispatch" (weekly English newspaper from 9 Baishak 2047 B.S.).

Gorkhapatra Corporation has been providing the sound contribution through the various ways to the nation according to its motto. Now the corporation is happy to find itself in present condition & is sincerely grateful to its founders who offered valuable contributions in its establishment process as well as of its welfare in the critical time of "Rana rule"

## 1.3 Statement of the Problem

Industrialization is an effective means of achieving economic development. It is the major hope, which can raise the living standards and provide better quality of life in the country. In the absence of industrialization, Nepal's problems like poverty, insecurity and overpopulation cannot be solved *(Pradhan, 1984:14)*.

The center problem of economic development of the background countries is industrialization. It is one of the major tools with the aid of which the vicious circle of background and poverty can be broken *(Cuker, 1974: 9).*

It's also a major instrument of progress, modernization and social change in developing countries *(UNDP, 1974:1).*

Nepal is in infancy period of industrialization. The manufacturing sector is very small. In recent years the growth rate is relatively more satisfactory. The manufacturing sector has to face numerous problems which have acted as constraints in the growth of manufacturing industries. Mainly such problems are caused by the land locked situation of the country, undeveloped situation of the country, undeveloped situation of physical human, financial and administrative infrastructure and energy at reasonable rates, non-availability of trained and skilled manpower, shortage of capital, small size of market unawareness of the industrial potential, higher cost of production, low productivity of inputs, manpower and technology, instabilities in government policy etc.

The industrialization process in Nepal is being developed very slowly. In spite of various attractive policies of the government in respect of industrialization, new investment made on industrial sector is not satisfactory. The financial performance of established manufacturing industries is also not good. Most of the industries are operating in losses and such condition of the established industries discourages the new investment both in manufacturing and non-manufacturing sector. There may be various and different reasons for the poor performance of manufacturing industries. Such reasons should be investigated and should be taken corrective measures for the improvement of their performance.

How the business is being operated largely depends on how the business operation is planned ? The key motive of every business enterprise is to make and maximize profit. Profit just doesn't happen by chance, it is to be managed. Cost-volume-profit analysis is a

supplementary tool of profit planning. CVP analysis is hugely helpful for developing alternative strategies in sales planning and cost estimation.

Nepalese firms are still being run with primitive management. They lack modern management culture; there are a lot of differences between the theory and practice in the business form. In Nepal, the practice of using CVP analysis tools for different management decision is rare.

CVP analysis provides the technique of profit planning framework. Based on annual published annual report, performance of the Nepalese industry is not satisfactory. Poor performance is the outcomes of poor planning controlling, decision making. The question has risen whether Nepalese managers are enough competent? Do they use CVP analysis tools and technique to carryout planning, decision making and controlling function? The research question focused mainly in this study will be following:

1 What are the major difficulties in application of CVP analysis?
2 Why are the Nepalese companies suffering from loss?
3 Which part (i.e. CM, BEP, and MOS etc) Of CVP analysis is mostly practice and which are not practice till now to avoid losses?
4 What sales volume is needed to achieve break even?
5 What are the different types of costs involved in practicing CVP?
6 What should be the sales volume to earn a desired profit?
7 What will be the profit or loss to the specified level of sales?
8 What will be the relationship between cost, volume and profit?

## 1.4 Objective of the Study

The study is divided into main objective and specific objectives.

**Main objective**

- To compare the cost and profit scenario between The Kantipur Publication and Gorkhapatra Corporation

**Specific objective**s

- To study and analyze existing position of cost volume and profit of houses.
- To evaluate and analyze the breakeven point of houses for avoiding losses.
- To analyze profit volume ratio, breakeven point, margin of safety and volume of the

enterprises comparatively.

- To examine the cost components as per their behaviors.

## 1.5 Significance of the Study

This study will be significance in the following ways:-

- This study provides necessary recommendation to the related department of the company.
- This study will be useful for potential managers, accountant, policy maker and planners
- It examines the application of CVP analysis in the company.
- It provides information on the application of the tools under profit planning in difference circumstantiate.
- It will also provide the literature to the researcher, who wants to carry on further research in this field. .

## 1.6 Limitations of the Study

Each and every research has some limitations. Basically, not availability of required data and information would be the major limitations of the study. The study is confined only to CVP analysis as a tool of profit planning and control.

- The study will cover the data of five years only from Kantipur Publication and Gorkhapatra Corporation.( i.e. 2061/62-2066/67)
- The study will base in the secondary data mostly, if there is necessary of primary data researcher will collect and included.
- The accuracy of this study will depend upon the true response and the data available from the management.
- This study would only concern with fulfilling the partial requirement in Master in Business studies (MBS).

## 1.7 Organization of the Study

The entire study has been divided into the following five chapters:-

**Chapter 1:- Introduction**

The chapter is introduction framework that includes background of the study, profile of the concern company, statement of the problem, objective of the study, significance of the study, limitation of the study and organization of the study.

**Chapter 2:- Review of the Literature**

This chapter concerned with review of literature. It focuses on the theoretical part of the study including conceptual review and review of previous related studies.

**Chapter3:-Research Methodology**

These chapters deals with methodology that includes research design, source of data, data collection procedures and data analysis tools.

**Chapter 4:- Presentation and Analysis of Data**

This is the most important and most extensive chapter as it includes the main theme of the study. This chapter deals with the presentation and analysis of collected data and information. For this purpose various analytical tools will be used.

**Chapter 5:-Summary, Conclusion and Recommendation**

This chapter is the final chapter of the study which includes summary of the study, major finding, conclusion and recommendation

# CHAPTER-II

# REVIEW OF LITERATURE

## 2.1 Conceptual Framework

It is a process of extensive survey of available literature both published and unpublished works on the chosen area of research problem primarily aiming at developing theoretical framework of the study.

In order to make a research on the subject some other literature should also be reviewed. Review of the literature supports to revise the eminent literature related to the study. Main purpose of literature review is to find out the past works done in the subject on the areas of research. Some possible study and conceptual prospective available in this respect is also reviewed. Various books, articles, journals, bulletins, reports, news statement, research study published by various institutions and some thesis etc. are the bases for preparing it.

## 2.2 Historical Background of Print Media

History of media goes parallel with the political history of any country. We can also witness similar situation in Nepalese context. The history of Nepali media has been immensely influenced by the Nepalese political history.

The political history of Nepali journalism can be divided into seven phases.

1. Traditional communication system
2. Rana period
3. Period after the establishment of democracy
4. Panchayat period
5. Period after the restoration of democracy
6. Period during king's regime
7. Period following the success of People's Movement-2063 BS onwards

**Traditional Communication System- Before 1903 B.S.**

During the period, there were no any aids of print and audio-visual media. This period of traditional communication system is non-recorded history of Nepali Media. Bengal Gazette, as the first newspaper of the South Asia, was published from Calcutta, India in1837 BS (1780AD). 'Katuwal Karaune', 'Jhyali Pitne', 'Sankha Phukne', 'Damaha Thataune', 'Karnal Phukne' etc. were in the form of media practice for public information and mass

communication during this period in Nepal

**Rana Period**

This period is considered as the initial phase or beginning of the development of journalism of Nepal.In 1908 BS, then Prime Minister Jung Bahadur Rana (JBR) imported a hand press instruments in Nepal from Europe in course of his visit there.Although it was used for publication purpose only after 58 years of its entry into Nepal, It was said to be the first press machine here. It was kept at JBR's then Palace at Thapathali, Kathmandu. Due to the trademark of an eagle pasted in the machine, it was often called 'Giddhe Press'. But its official name was Type Printing Press

**Newspaper publication during Rana Period**

1. Sudha Sagar,
2. Gorkhapatra,
3. Sharada: Monthly newspaper started publishing in 1991 Falgun, Editor: Rhiddi Bahadur Malla,
4. Udhyog: Fortnightly magazine published first in 1992 BS, Editor : Suryabhakta Joshi
5. Sahitya Shrot: Baisakh, 2004 BS, Monthly Literary Magazine, Editor: Hridayachandra Singh Pradhan;

Similarly, Gharelu Ilam Patrika: Editor: Bhimnidhi Tiwari. Shikshya: Editor: Bhimnidhi Tiwari. Kathmandu Municipal Patrika, published on the initiative of Kathmandu municipality, etc.

Juddha S. JBR was positive to develop media industry in the country. So, this newspaper was published as a journal to impart industrial information. But it was converted to the literary magazine after two years .It got published having various poems of great poet Laxmi Prasad Devkota.

**Radio Broadcasting**

Indian and other foreign radio programs were likely to listen in Nepal during the rule of Judda S. Rana There were only few sets of radio with well-off families of Nepal and they brought the sets from India. But all radio sets were seized by Juddha S. JBR during the Second World War due to German propaganda. Prime Minister Padma S. JBR returned those radio sets to respective owners in 2003 BS. First test broadcasting was carried out

from Bijuli Adda, Kathmandu in 2003 Magh 14 from 1:00 to 1:3o PM. Electrical Engineer Kashi Raj Pandey was the main person to carry out this test broadcasting. It was not exactly the radio frequency but the only radio sounds.

Ramayan and other religious hymns were played in during the occasion of religious days through loud speakers in and around Tundikhel. Nepali radio came to introduction through revolution. Narad Muni Thulung, Jayandra Bdr.Thapalia and their friends made efforts to broadcast radio programme from Bhojpur. It was the practice of mobilizing people against Rana oligarchy in Nepal. In Mangshir, 2007, they started the radio frequency for the first time in the history of Nepalese radio. Later on, under the leadership of Tarini Prasad Koirala 'Prajatantra Radio' broadcasting was initiated in 2007 from the premises of Raghupati Jute Mills, Biratnagar. It was also a part of anti-Rana revolution. After establishment of democracy, the same transmitter was brought to Kathmandu and started Nepal Radio as a state run broadcasting service from 2007 Chaitra 20th , again under the leadership of Mr. T.P. Koirala. In this way, a few but important steps were taken in the establishment of radio in Nepal after toppling down of 104 year-Rana regime.

**Period after the establishment of democracy**

This period is taken as the initial stage of the Nepalese journalism. Various sectors such as education, economics, politics, journalism etc were immoderately benefited following the establishment of democracy. Political parties enjoyed open environment and democratic institutions were established and strengthened. Within 24 hours of the proclamation of democracy, 'Awaj' the first daily news paper of Nepal was published in Falgun 8, 2007 from Kathmandu. Siddhi Charan Shrestha was the Editor of the newspaper. It presented banner headline news on royal proclamation of democracy establishment, along with photograph of King Tribhuvan in its first issue. Unfortunately, Awaj sustained just for two years.

In Bhadra 24, 2011 BS, 'Samaj', the second daily newspaper was brought out from Kathmandu, Editor of the newspaper was Pashupati Dev Pandey; later Mani Raj Upadhyaya gave editorial leadership to the newspaper. Many weeklies, half weeklies and dailies got published during the period. Women also took initiatives to publish the newspaper. In 2008 Jestha 'Mahila' a monthly magazine was published having Editors namely Sadhana

Pradhan and Kamakchha Devi (first female journalist of Nepal). Journalism was started in various languages like English, Newari, Hindi in Nepal.
'Nepal Guardian' is the first English monthly magazine which was published from Kathmandu in 2010 BS (1948 AD). The magazine was printed in Calcutta, Editor- Barun Samsher JBR.

'Jai Nepal', the first Hindi Daily, was published in 2012, Shrawan from Kathmandu. Editor was Indra Chandra Jain. The publication took place out of Kathmandu valley. 'Sewa' was the first monthly newspaper published from out of Kathmandu valley (Birgunj) in 2008, 'The Commoner', the first English daily newspaper of Nepal, published from Kathmandu in 2012 (1956 July 15),Editor- Gopal Das Shrestha.Other newspapers published in English language include, Daily Mirror, Everest News, The Motherland etc.In Kartik, 2009, 'Pasa ', a fortnightly newspaper was published in Newari language. Editor of the newspaper was Asharam Shakya. 'Nepal Bhasa Patrika', the first Newari daily newspaper was published from Kathmandu in 2012 Asoj 16.

Fatte Bdr. Singh was the Editor of the newspaper. 'Tarang Weekly', the first Hindi newspaper, got published from Kathmandu in 2008 Shrawan, Editor- Bhoj Bahadur Singh.It was printed in Banaras of which Editor was Shyam Prasad Sharma. The regular broadcasting of Radio Nepal started under the leadership of Tarini Prasad Koirala in 2007, Caitra 20 from Singha Durbar, using the same transmitter of Prajatantra Radio. News Agency- Nepal Sambad Samiti, the first news agency of Nepal established in 2016, Paush 1 from private sector. Sagarmatha Sambad Samiti (second news agency) was incepted in 2017, Baisakh 30.

Mainly political parties were enthusiastic to publish the newspaper as a means of political awareness at the moment. Around 35 political publications took place during the period. Some main political party publications were Nepal Pukar and Nawa Nepal published by Nepali Congress, Nepal Sandesh and Jana Bani by Rastriya Praja Parishad, Nawa Yug by Communist Party of Nepal, Mashal, Naya Bato by Nepali Rastriya Congress, Samyukta Prayas by Samyukta Prajatantra Party, Karmabir by Karmabir Mahamandal etc. Most of them were weeklies.
Parliamentary reporting (2016 / 2017) was also started at that time. Bhogya Prasad Shah

and Prakash Man Singh were first parliamentary reporters. They were associated to Radio Nepal and used to provide news to the parliamentary secretariat.

Publications of this period can be divided into 5 categories;
a) News oriented - dailies
b) Views oriented- weeklies, half weeklies and fortnightlies
c) Language and literature oriented - monthlies, bimonthlies
d) House journals - publications of parties and other institutions
e) Government publications
-Journalism of this period can be named as 'initial stage of modern journalism in Nepal'.

**Panchayat Period ( 2017 to 2046 BS)**

Panchayat period is taken as the period marking the beginning of mission journalism. For the first time in the history of Nepal, the mission journalism was introduced during the period. Journalism during the period was divided into two missions: pro-panchayat and anti panchayat.Main objective of the pro-panchayat newspaper was to justify the necessity of the panchayat system whereas anti-panchayat newspaper came to front to advocate for democracy. Press freedom was not more in practice and many actions took place against press. There were two phases of journalism: Before Referendum (2017 to 2036 BS) and After Referendum (2036 to 2046BS).

Views oriented weekly newspapers were more popular at that time. Although there was no guarantee of civil rights and press freedom during the period, development of infrastructure was sped up in various sectors of press. Ministry of Communication was given autonomy. Earlier, other Ministries looked after the portfolio related to information and communication. News Agency was established as a government media and at the same time Press Council was founded on the initiative of government. The Tribhuvan University began teaching journalism education and press publication and media development took a professional turn. Nepal entered into the television era and radio was expanded outside Kathmandu.

Gorkhapatra became daily from 2017 Falgun 7 (after 59 years of its publication).Gopal Pd. Bhattarai was first editor of daily Gorkhapatra. The Rising Nepal national daily

publishedin 2022 Paush 1, Editor Barun S. JBR. Other dailies; Hamro Desh, Naya Nepal, Nabin Khabar, Naya Samaj, Nirman (Biratnagar), Jana Jeevan (Birgunj), Dainik Nirnaya (Pokhara / Bhairahawa).

Some Leading weeklies : Samikchha, Matribhumi, Naya Sandesh, Saptahik Manch, Jana Sambad, Yug Sambad, Jana Jyoti, Jan Jagriti, Deshantar, Dristi, Punarjagaran, Saptahik Manch, Saptahik Bimarsha, Rastra Pukar, Chalphal, Pratibadha, Gatibidhi, Tarka, Arati, Arpan, Panchayat Bato, Anchal Sandesh (Janakpur), Lumbini Sandesh, Bheri Sandesh, Gandaki Sandesh, Himalayan Guardian, Nepal Review, The Nepalese Perspective etc.

**After restoration of Democracy (2047 to Magh 2059)**

This period is regarded as the phase of modern and professional journalism in the history of Nepali journalism. After the success of people's movement, new constitution (Nepal's constitution 2047) has guaranteed the press freedom and right to information to people. It was widely praised. Wide impact of this provision has been seen to the media sector. Political and other sectors have also been benefited by this freedom. This provision encouraged the media sector luring huge investment in media. Media became professional and it was accepted as the industry of the country. Political parties became free and Political activities sped up. Before this, man cannot imagine television run by private sector. Television and Radio in private sector started and are going on. Offset press came into use and due to the accessibility of computer media became too advanced. So there was a favorable environment to develop professional journalism in Nepal.

The door has been opened for huge investment and from private sector Kantipur Publications established with ambitious investment of more than Rs.30 million ( 3 crore). Kantipur and The Kathmandu Post, the first broad sheet national dailies from private sector were published in 2049 Falgun 7th. Due to the popularity in the short time many other broadsheet dailies came out. Some of them sustained and some went out from the sight. During this period online journalism also came out and because of the computer it was possible to read the newspaper and to hear the radio in computer.

Shree Sagarmatha, Everest Herald (English daily), Lokpatra, Space Time, Space Today, Shree Deurali, Naya Sadak stopped their publication not because of government but by their own problem. Simultaneous publication also started to get published. Nepal

Samacharpatra started to publish from Biratnagar since 2058, Baisakh . Kantipur started since 2061 Ashar from Bharatpur. Newspaper publications were also stared from outside the country. For example Nepal Samacharpatra initiated its publishing from Doha, Qatar since Ashad, 2062. Although it could not sustain for a long time. Now Kantipur and Rajdhani dailies have their weekly publication from Doha but not simultaneous. Newspaper publication in different languages was started and going on. Significant changes have occurred in radio broadcasting after 2047 and radio Nepal has started to broadcast the news service in 20 different languages. New wave of FM broadcasting from non government and private sector has become significant initiative in South Asia. Private channels in television came into the light. Channel Nepal, Kantipur TV, Image started their service. New debate on foreign investment in media and multi media ownership is on. The FM's expansion is significant in this period and it is going on in a new height. There seemed the very gloomy picture in Nepalese media during the Maoist Conflict, State of Emergency and during the period of direct rule by the king Gynendra. Some 18 innocent media persons killed, more than 100 put behind the bars, several cases of arrested, kidnapped and tortured from both sides i.e. state and Maoist insurgents . Nepal was characterized as ' the world's biggest prison for the journalists.

**Period o King's Regime**

Militarization over the news and media was started at the king's regime. Presence of military officials in media houses and even news rooms was normal. Confiscation of radio equipments from FM studios and unfair distribution of government advertisements was in use. The radios of country played the vital role against the king's regime and to establish democracy.

**After success of people movement-2 ( 2063 Baishak Onwards)**

Nepali press played an important role against king's regime. It fought for the freedom of press and democracy. Due to its contribution to the democracy Nepali press is admired among the society and government itself also created the favorable atmosphere to exercise press freedom. No any restriction or pressure from the state and rebels after the democracy.

**Current situation of Print Media**

After restoration into Federal Republic, Democratic Nepal the area and role of media be-

come wide and played important role in different subject matter not only in political aspects but also economic, socio-cultural, technical, public awareness and many more. It presents fact and real information to public which helps to increase awareness to people. Till 31st Ashad, 2069 there more than 6000 journal are registered to Department of Information of Nepal some of them are passive but much of them are active and provide service from different geographical regions of the country.

In general Nepal Press Council record at presents 3,408 journals in four groups. They are daily, half weekly, weekly and half monthly in which 542 daily, 28 half weekly, 2466 weekly 372 weekly. In total of 1527 journals, 188 daily, 7 half weekly, 1105 weekly and 227 half monthly are published from Kathmandu Valley, (Kathmandu Lalitpur & Bhaktapur) which holds 44.80 % of total journal publication of the country and rest from outside the valley.

The regional figure continuously leading regions are 2296 from Mid-region, 506 from Eastern region, 291 from Western-region, 163 from Mid-western region and 152 from Far-western region. It holds 67.37, 14.85, 8.54, 4.78 & 4.46 percent of journals publication simultaneously.*( Annual report 2068/69 Nepal Press Council*)

## 2.3 Introduction to Profit Planning

Profit planning is the key point of management. Without proper planning, profit will not be achieved in the expected extent. Therefore, every enterprise should plan for profit in a systematic way. Various functional budgets are the basic tools for proper planning of profit and control. (Welsch, 1992;31)

Profit planning function of management rests upon some fundamentals views that are the conviction that a management can plan the long range destiny of a manufacturing enterprise by making a continue streamed of well-conceived decision. The thrust of the comprehensive profit planning concept goes to the very heart of management that is the decision making process especially for long range success. The streamed of managerial decision must generate plans and actions to provides the essential inflows that are necessary of support the plant outflow of the enterprises. So that, realistic profits and return on investment are earned. Continuing generation of profits by managerial manipulation of the in-

flow and outflow provides the substance of profit planning'. *(Welsch, 1992:31)*

### 2.3.1 Profit

An organization is established to achieve some goals. It has its own objectives. To achieve the goals of organization, objectives should clearly mention. In this competitive globalize business age, an organization whether it is public or private, profit is essential. Profit isn't change; it is result of successful management. The basic objectives of running any business organization are to earn profit. Profit serves as a yardstick for judging the competence and efficiency of the management. (*Maheshwari, 2000:171)*

The word "profit" implies a comparison of the operation of the business between two specific dates which is usually separated by an interval of one year. In order to optimize those corporate source of wealth in which national prosperity depends on those corporate financial objectives of the company is to maximize within socially acceptable limits profit from the use of funds employed by them. The maximization of profit within socially acceptable limit implies that a proper regard to public interest has been paid. No company can survive long without profit; profit is the ultimate measure of its effectiveness and in a capitalized society. There is no future for a private enterprise which always increased loses. The survival measure of the effective performance of a business is a profit which really is a measure of how well a business performs economically. Profit is a signal for the allocation of resources and a yardstick for judging managerial efficiency. Profit is a primary objective of a business in view of the heavy investment which is necessary for the success of most enterprise. Profit in the accounting sense tends to become a long term objective which measures not only the success of product but also the development of market of it. *(Kulkarni, 1985:245)*

### 2.3.2 Planning

Planning is the first essence of management and all other function is performed within the framework of planning. Planning means deciding in advance, what is to be done in future? Planning starts from forecasting and pre-determination of future events. Planning is the whole concept of any business organization. No firm can achieved its pre-determined goals and objectives in the absence of proper plan. Hence, it is life blood of any organization which makes efficiently run towards the competitive environment.

Planning means a assessing the future making provision for it and assuring that establishing goal can be met with acceptable home frame. Define the planning is simplest term as determination of anything in advance of action. It is essentially a decision making process that provides a basis for economical and effective action in the future. Effective planning sets the stage for integrated action to take place, reduce the number of enforceable crisis, promotes to use of more efficient methods and provides the basis for the managerial function of control. (*Filppo, Sixth edition : 49)*In operational terms, planning process involves four stages *;( Welsch, Hilton and Gordon, 1992: 75)*

**Objectives**

- The first stage in the planning and control system is setting the objectives which are deigned as the broad and long range desired state or position in the future. They are motivational or directional in nature and expressed in qualitative terms.

**Goals**

- The second stage in the planning process is specifying the goals. The term goals as an element in planning represent targets, specified in quantitative terms to be achieved in a specific period of time.

**Strategies**

- The next step involves laying down the strategies. Strategies denote specific methods or course of actions to achieve the goals. Strategies are the basic thrusts ways and tactics that will be used to attain planned objectives and goals. A particular strategy may be short term and long tem strategies focus.

**Budgets/Plans**

- The final step is the preparation of budgets/plans. Basically budgeting is the periodic planning to implement the alternative during a particular fiscal period, usually one year. It converts goals and strategies into annual operating plan.

### 2.3.3 Profit Planning

Profit planning is the primary function of management in any organization. A company always wants to earn maximum profit through the optimum utilization of available resources. Profit planning measures the success of any organization. Various budgets are major elements of profit planning. It is a key which helps to predict the future, minimizes risks, estimates output from the scarce resources and helps for various managerial decision

making processes.

Profit planning is, therefore a fundamental part of the overall management functions and is a vital part of the total budgeting process. The management determines the profits goals and prepares budgets that will lead them to the realization of these goals. Profit planning can be done only when the management has the information about the cost of the products both fixed and variables and the selling price at which it will be in a position to sell the products of the company. *(Maheshwari, 2000: 171).*

## 2.4 Cost Volume Profit Analysis

Cost Volume Profit Analysis seeks to estimate the profit or loss at different activity level. The aim of Cost-Volume-Profit Analysis is to have a fair estimate of (a) Total Costs (b) Total Revenues, and (c) Profit at various sales volumes.

Basically, CVP Analysis involves finding the most favorable combination of variable cost, fixed cost, selling price, sales volume and mix of products sold. CVP Analysis provides the managers with a powerful tool for identifying that course of the action that will improve profitability.

Cost-Volume-Profit Analysis is a systematic method of examining the relationship between changes in activity (i.e. output) and changes in total sales revenue, expenses and net profit. As a model of their relationship, CVP Analysis simplifies the real world conditions that a firm will face like most models which are abstractions from reality. CVP Analysis is subject to number of underlying assumptions and limitations. Nevertheless it is powerful tool for decision making in certain situations. *[Drury, 2000:112]*

The key motive of business enterprises is to make and maximize profit. Profit does not happen by chance. It is to be managed. Cost-Volume-Profit Analysis is supplementary tool of planning for profit. CVP Analysis is immensely helpful for developing alternative strategies in sales planning and cost estimation. Cost-Volume-Profit Analysis is an accounting technique showing the relationship between variables. It is equally applicable for non-profit making organization to allocate scare economic resources most effectively among

the completing alternative. Allocation of scare resource among the various demanding sectors is the most important part of national planning.

A popular technique to study CVP relationship is Break-Even (BE) Analysis. Break-Even Analysis is concerned with the study of revenues and cost in relation to sales at which the firm's revenues and total cost will be exactly equal or the net income will zero. It is no profit no loss sales. This point is cornerstone of profit planning. Cost-Volume-Profit Analysis is popular analysis tool of management. It is very useful in profit planning and control, management decision, cost control, budgeting etc

### 2.4.1 General Assumptions in Cost-Volume-Profit Analysis

Cost-Volume-Profit Analysis is a vital technique that provides supplementary information for profit planning. Every business starts with the target of break-even and then if aims to earn profit over its life. But the business firm passes through many ups and downs. CVP Analysis helps to plan for every set of goals in the short-run. But the CVP Analysis encompasses the following assumptions: [Ojha and Gautam, 2008:315]

**a) Classification of all Costs as Variable and Fixed**

While developing and applying Cost-Volume-Profit Analysis including the break-even analysis, we have assumed that all costs can be classified into fixed and variable components. In fact, it is extremely difficult to identify each and every cost element as fixed and variable ones. Even we are required to classify the costs as fixed and variable component. If one fails to identify the costs as fixed and variable, the application of Cost-Volume-Profit Analysis becomes almost impossible.

**b) Linear Behavior of Costs within the Relevant Range**

CVP Analysis assumes that the total fixed costs do not change in the short-run within the relevant range. Total variable costs are exactly proportionate to sales volume. But in reality cost behavior may not remain constant. With the change in the volume of output we change the production setup. With more or less purchase, material costs per unit change due to quantity discounts. Costs change over time owing to inflation. Discretionary fixed costs are not certain in terms of what amount will be spent. Therefore, our BEP units or any other variable of profit functions do not remain constant over

time. And it's useless to compute the BEP and other variables at every moment for the changed situation.

**c) Treatment of Step Fixed costs**

The relevant range for many costs is very short. In that case it becomes very difficult to compute the required volume.

Because we cannot say this is the relevant range for our needed volume.

**d) Constant Selling Price for any volume in the short-run**

Indeed, most often we offer a quantity discount for different lots of production. This makes it difficult to determine the CMPU and C/M ratio.

**e) No effect of the size of inventory on net income**

The application of CVP Analysis is possible only under the situations of either following variable costing for inventorial product cost or all production volume be sold within the same period. CVP Analysis does not work under the full costing method where inventory change occurs.

**f) Single product or constant sales mix**

Cost-Volume-Profit Analysis assumes that either a single product is sold or, if more products are sold, the ratio of each product on total sales will be in accordance with a predetermined sales mix. It is possible only under the assumption that the company will sell in the same proportion as it sold in the previous year. But in real situations, sales mix does not remain constant. This makes the application of CVP Analysis impossible in case of multi-product company.

**g) Short-term time horizon**

CVP Analysis is a short-term planning tool, because nothing remains stable in the long-run. In the condition of changing variables all equations of Cost-Volume-Profit Analysis become impossible.

Certain underlying assumptions place definite limitations on the use of Cost-Volume-Profit Analysis. Therefore it is essential that anyone preparing cost-volume-profit information is aware of the underlying assumption on which the information has been prepared.

If these assumptions are not recognized, serious errors may result and incorrect conclusions may be drawn from the analysis.

### 2.4.2 Application of Cost-Volume-Profit Analysis

Cost-Volume-Profit Analysis is applied specially for Break-Even Analysis and Profit planning. Profit planning is fundamental aspect of overall management function. Profit planning can be done only when the management has the information about the fixed and variable cost of product and selling price of the product. The most important factors that affect the planning for profit are costs fixed and variable costs and volume of sales. CVP Analysis can be applied in the following respects. [Dangol, 2004:120]

- It helps in fixation of selling price.
- It is helpful in cost control.
- It also assists the management in understanding the behaviors of cost and helps in budgeting control.
- It helps in determining the level of output where all the costs can be met.
- It assists the management in profit planning. It also assists the management in performance evaluation for the purpose of management control.
- It helps very much in making managerial decisions such as make or buy a part, drop or continue a department or product line, accept or reject a special order, selection of profitable product mix etc.

### 2.4.3 Importance of CVP Analysis

Planning controlling and decision making are the essential management functions. CVP Analysis helps the manager to plan for profit to control cost and make decision. It helps:

- To determine the breakeven point in terms of unit or sales value.
- To ascertain the margin of safety.
- To estimate profits or losses at various level of output.
- To assess the likely effect of management decisions such as an increase or decrease in selling price adoption of new method of production to reduce direct labor cost and increase output.
- To help management to find the most profitable combination of costs and volume.
- To determine the optimum selling price.

- To determine the sales volume at which the profit goal of the firm will be achieved.
- To determine the maximum sales volume to avoid losses.
- To determine most profitable and least profitable product.
- To determine new breakeven point for changes on fixed or variable cost. [Munakarmi, 2003:401-402]

### 2.4.4 Limitation CVP Analysis

Assumption limits the utility ad general applicability of the CVP Analysis. There fore the analysis should recognize these limitations and adjust data, wherever possible, to get meaningful results. The CVP Analysis suffers from the following limitations:

- It is difficult to separate costs into fixed and variable components.
- It is not correct to assume that total fixed cost would remain unchanged over the entire range of volume.
- The assumptions of constant selling price and unit variable cost are not valid.
- It is difficult to use the break even analysis for a multi product firms.
- The break even analysis is a break run concept and has a limited use in ling range planning.
- The break even analysis is a statistical tool. [Pandey, 1999:214]

## 2.5 Cost Classification

Classification of an item is to define it as a certain kind. In other words, classification means to put an item or thing under a certain category. Classification of cost depends on the purpose, methods, nature and so on. Same elements of cost can be varied in category depending upon the purpose. Manager of profit planning department should have an in-depth knowledge regarding the nature of costs that on which category does it lie. Otherwise, planning and control of cost is impossible.

### 2.5.1 Cost Classification for Product Costing

**a) Prime Costs**

The direct material, direct labor and direct expenses are prime costs. These costs are known as prime costs because these can be directly known with each cost object. The elements of prime costs are as follows:

**Direct Material:**

Direct material is the cost of materials, which is directly and conveniently identifiable or traceable to each unit of product. Direct material, also known as row material, is the main ingredient of the finished product. Finished products are the refined or value- added forms of the direct material. A tangible product is almost impossible without the direct material. It includes crude materials, components or parts, WIP inventory and primary packing materials like cardboard boxes. Cost of materials includes not only the price paid to a supplies; it also includes the freight-in, import duties, cost of receiving and cost of storing the materials.

**Direct Labor:**

Direct labor costs can be directly traced to each unit of product without any apportionment basis. Direct labor is, therefore, defined as the employment of those workers who are physically engaged in the production of the output. The labors that are paid with each piece of marginal product are direct labors. It includes the wages of operatives who assemble parts into finished products such as the sewing labor in a garment factory that is paid per piece of time spent to make shirts, paints and trousers.

**Direct Expenses:**

Direct expenses are the expenses other than the direct material cost and direct labor cost which are directly incurred on a particular product. Direct expenses can be directly identified with each units of a product. It includes cost of product designing, product model, handling from one process to the next process, cost of patent and royalties and so on

**b) Overhead Costs/Indirect Costs**

The costs that are not directly attached into any particular department product of units are indirect cost. Indirect cost is the common cost e.g. salary of the manager, which is a common cost for all the departments. Such a cost should be allocated to different units, subunits, departments and products as per the activity (cost driver). The expenses that can not be directly known with each unit of product are overhead costs, which include indirect materials, indirect labors and other overheads. Overheads costs are those expenses, which can not be directly traced or identified with each unit of the product. In fact, overhead costs are indirect costs, which can not be directly charged to a particular unit of product without al-

location of these on the basis of some appropriate methods. The term "Overhead" is used inter-changeably with the terms such as "indirect costs" and "burden". Key elements of overhead costs are:

**Indirect Materials:**

Indirect material costs can not be identified with any one product. For example, materials used for the repair of machinery that is manufacturing different kinds of products are classified as indirect materials. Indirect materials are used for the benefits of all products-rather than for any one particular product.

**Indirect Labor:**

Indirect labor cost is the remuneration of all those employees who do not work on the product itself but who assist in the manufacturing operation. Salaries of a factory supervisor or salary paid to a purchasing manager are the example of indirect labor cost. Indirect costs can not be directly charged to a particular unit of product.

**Indirect Expenses:**

Indirect expenses are the expenses other that the above-mentioned indirect costs. It cannot be conveniently traced to each unit of product. For example, rent, stationery, heat, light, power, etc.

### 2.5.2 Functional Classification of Costs

An organization performs various functions. All of these functions require costs. Functional classification of costs refers to how and where cost was used.

**a) Manufacturing Costs**

Manufacturing costs are all production costs incurred to manufacture the products and to bring them to saleable condition, including the direct material, direct labor and factory overheads. It includes all indirect manufacturing labor and material costs plus indirect manufacturing expenses. It is also known as factory expense, factory overhead and factory burden or work overheads.

**b) Administrative Costs**

Expenses relating to the overall management of an enterprise are administrative costs. It includes executive salary, corporate administration, general accounting, public relation, internal audit, rent and depreciation of office properties, and so on.

**c) Marketing or Selling Costs**

Expenses needed for sales promotion, actual sales activities and post sales services are included in marketing or selling costs. These would include all costs necessary to receive customer order and to get the finished product or service into the hands of the customers. For example, selling costs include- advertising, salesmanship training, carriage outwards, assets when incurred in the course of production and expensed, when the outputs are sold. Direct material cost, direct labor cost and manufacturing overheads are included in product cost.

**d) Period Costs**

Those expenses, which do not matter for the volume of production but are incurred in the passage of time of volume of sales, are period costs. All period costs are expensed at the time of occurrence. Period costs are expensed when they are incurred. Office administrative and selling/distribution costs are period costs. Period costs are not charged to inventory values; rather they are directly deducted from the sales revenues (gross margin) of the same period. Period costs are costs, which vary with the passage of time and not the volume of production. Rent, insurance, salary type expenses vary only with time period. It includes salaries, depreciation, stationeries, rent, entertainment, audit, etc related to office, administrative, selling and distribution. Rent, insurance, salary type expenses vary only with time period.

**f) Joint Product and Further Processing Cost**

Joint product costs are the costs of a single process of a series of processes that simultaneously produce two or more products of significant sales value. Such costs are not attributable to different individual products until after a certain stage of production known as the split off point. Separable costs can be attributed exclusively and wholly to a particular product, process, division or department.

### 2.5.3 Cost Classification for Profit Maximization Decisions

Profit planning is quite closely related with decision-making. Planning deals with the future. Future cost is a relevant cost in profit planning. "Different costs for different purposes" have been the core concept of cost classification in management and cost accounting. Decision-making is one most crucial function of management. Decision-making is a process of selecting the best alternative among various courses of actions available

**a) Relevant Costs**

A cost, which is influenced by a decision, is a relevant cost and hence is important for decision makers. Relevant cost in true sense is an incremental cost. Relevant costs are those costs, which differ from one alternative to the next. Since relevant costs change as per the alternatives, these are most pertinent to our profit maximization decision. It is because to maximize the profit, either one has to get more revenues with the same costs or has to incur fewer costs for the same revenue. Relevant costs have two fundamental characteristics: one is; relevant costs are future costs and another is; it is to be relevant for decision-making.

**b) Irrelevant Costs**

Cost, which is not affected by a decision, is irrelevant cost. Such a cost is of no relevance to decision makers. These costs should be ignored while making decisions. Committed fixed cost is irrelevant while the additional fixed costs are of relevance. All costs other than the relevant costs are irrelevant for decision-making. For example, all past costs are irrelevant.

**c) Avoidable and Unavoidable Costs**

Sometimes the terms 'avoidable' and 'unavoidable costs' are used instead of relevant and irrelevant costs. Avoidable cost saves the cost but unavoidable cost cannot save the cost in the course of dropping a department or a product or alternative.

**d) Explicit Costs**

Explicit costs are those accounting expenses, which can be proved for external reporting purpose such as for tax purpose. Most of the explicit costs are out of pocket costs, which need to be paid cash to suppliers, employers, etc. But some of the explicit costs are non-

cash payments toward future service potential assets. Raw material consumed, direct labor, indirect labor, salaries, heat, light, etc. are the examples of explicit cost.

**e) Implicit/Imputed Costs**

Implicit costs are those expenses, which cannot be proved for external reporting. These are not allowable for the tax purpose. Implicit costs are implied in nature, which can just be understood, but may not need to be paid in cash at present or in future; for example, interest on owners' capital.

**f) Out-of-pocket Costs**

Out-of-pocket costs mean the cash incurred in an activity. Since, out-of-pocket costs involve a cash outlay it is very important for external reporting, and internal planning and decision making both. Like; raw material, labor, salary, rent, etc. are out-of-pocket costs. Cost, which requires current or future cash expenditure as a result of a decision, is labeled as an out-of-pocket cost.

**g) Marginal or Differential Costs**

Any cost that is present under one alternative but is absent in whole or in part under another alternative is known as differential cost. Differential cost is also known as incremental cost. Any cost which increases between the alternatives is incremental cost while the one that decreases is decremented cost. Both incremental and decremented costs are relevant in decision-making purpose.

**h) Opportunity Cost**

An opportunity cost can be defined as the potential benefit that is lost or sacrificed when the choice of one course of action requires the giving up of an alternative course of action. Opportunity cost is not usually entered on the books of organization but it is a cost that must be expertly considered in every decision that a manager makes.

**i) Sunk Costs**

Those costs that have already been incurred in the past and will not require any current cash expenditure are sunk costs. Sunk cost is the result of a past commitment. They should be ignored while making decision while out of pocket cost is relevant for decision-making

purpose. Mostly sunk cost deserves fixed behavior while out of pocket cost deserves variable behavior. But in the same situation, sometimes sunk cost might be variable while out of pocket cost bear to be fixed.

### 2.5.4 Cost Classification for Control

**a) Controllable Cost**

A cost is considered to be controllable if that can be managed of changed within the related responsibility center and within the given period of time. For example, hospitality expense would be controllable by a sales manager if he/she had the power to authorize the amount and type of entertainment for customers. But, controllability of costs fully depends on levels of management and time horizon.

**b) Non-controllable Cost**

Any cost that is not subject to change within the related responsibility c*en*ter and within the short time span is called a non-controllable cost. For example, depreciation of warehouse facilities would not be controllable by the sales manager, since he/she would have no power to authorize warehouse construction.

### 2.5.5 Cost Classification for Financial Reporting

**a) Absorbed and Unabsorbed Cost**

Fixed costs help create value in the product. The benefit of fixed costs will lapse with the passage of time and must be absorbed by the revenues of that period. The part of fixed cost, which is absorbed during the revenue of the particular period, is known as absorbed cost. Absorbed costs are those costs that have been charged to production. Cost, which remains unchanged, is known as unabsorbed cost.

**b) Expired and Un-expired Cost**

An expired cost is one, which has no future service potentiality. In contrast, unexpired cost is one which can contribute to the production of future revenue e.g. unexpired cost is inventory, which can be sold in subsequent years and will influence total revenues. Expired part of the prepaid expenses and business costs are expensed in income statement whereas the un-expired portion remains in asset side of the balance sheet.

**c) Capital Expenditures and Revenue Expenses**

Capital expenditures are those expenditures, which can not be used and generate income for an income year. For example, cost of machinery, cost of building, etc. Revenue expenses are those expenses which can use and generate income revenue for an income year and also the portion of capital expenditures, which is expensed an amortized this year. For example, cost of materials, labor cost, salaries, depreciation, etc

.

### 2.5.6 Cost Classification on the Basis of Cost Behavior

All costs do not show the same behavior throughout the operation. There exists a relationship between costs and the volume of activity. Cost behavior implies the relationship between cost and activity. In most of the organizations, costs can be classified as variable, fixed and mixed as these behave in relation to activity volume.

**a) Variable Costs**

Variable costs are the costs that tend to vary indirect proportion and same direction to changes in production activity, sales activity or some other measures of volume or cost driver. The costs of these inputs increase/decrease in proportion to increase/decrease in volume or cost driver. Variable costs change in direct proportion to and in the same direction as the changes in activity levels or outputs. Variable expenses are activity based because they are incurred as a directly unit of output, activity or work done. If the output doubles, variable costs will also double and vice versa. If a shop remains closed during a time there would be no variable costs. Variable costs show the following characteristics:

- Total variable costs are proportionately related to operate activity levels.
- Variable cost per unit is fixed.
- Variable costs can be regulated and controlled in the same responsibility in the short-run as will.
- Cost that changes proportionately in total but remains fixed per unit is variable.

**b) Step Variable Costs**

A cost that is obtainable only in large chunks and that increases or decreases only in response to fairly wide changes in the activity level is known as a step variable cost.

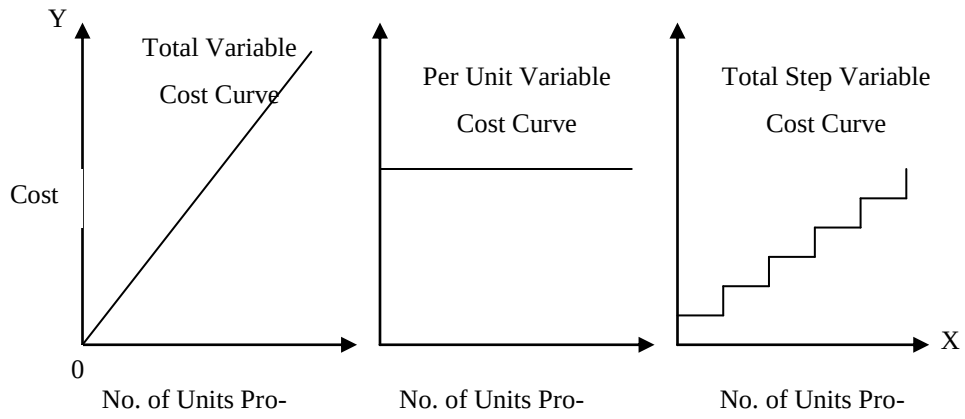



**Figure 2-1: Total Variable Cost, Per Unit Variable Cost and Total Step Variable Cost**

**c) Fixed Costs**

Fixed costs are costs associated with those inputs, which do not vary with changes in the volume of output of activity within a specified range of activity of output. Fixed costs thus remain constant whether the activity increases or decreases within a relevant range. It is unaffected by volume changes. Fixed costs show the following characteristics:

- Total fixed costs are constant.
- Fixed cost per unit is variable.
- Fixed costs are either capacity costs or the time costs or the committed costs.
- Fixed costs are regulated and controllable under top management.
- Fixed costs cannot be controlled in a short-term period and by the lower level responsibility center.

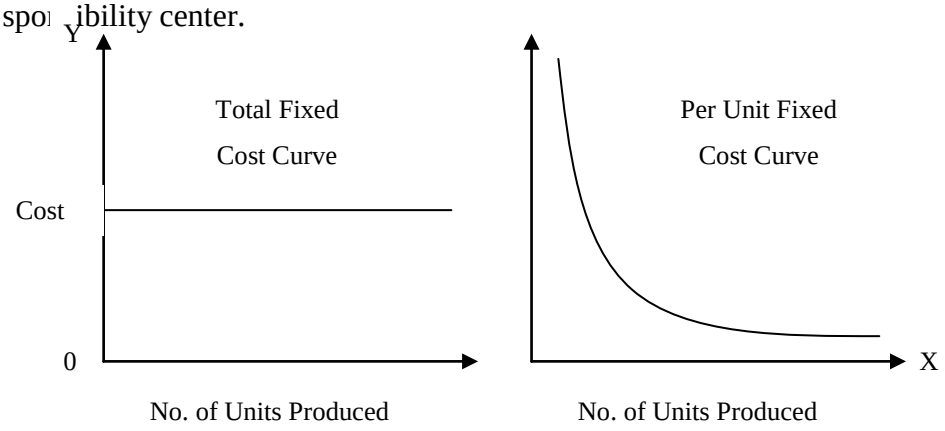



**Figure 2-2: Total Fixed Cost and Per Unit Fixed Cost**

Fixed costs may be the following types:

- **Committed Fixed Costs:** Committed fixed costs are those that relate to the investment in plant, equipment and the basic organizational structure of a firm. Examples of such costs include depreciation, property taxes, insurance, etc. The two key factors of com-

mitted fixed costs are that 1) they are long-term in nature and 2) they can not be reduced to zero in short-term.

- **Discretionary Fixed Costs:** Discretionary fixed costs arise from annual decisions by management to spend in certain areas. Examples of discretionary fixed costs would include advertising, hospitality, employee's training, research, and management development programs. Key features of discretionary fixed costs are 1) planning horizon for a discretionary fixed cost is fairly short-term and 2) under the critical circumstances it may be possible to cut certain discretionary fixed costs back for shot periods of time with minimum damage to the long-term goals of the organization.

- **Step Fixed Costs:** Step fixed costs remain constant over a wide range of activities bujump to a different amount for activity levels outside that range. Step fixed costs change abruptly at intervals of activity within the relevant range because the resources and their costs are only available in individual chunks. Step fixed costs are fixed for a short range of activities. Beyond the relevant range of activity all fixed costs jump upward. Therefore, step fixed costs are different from the normal fixed costs only in the sense that these move within the normal plant capacity. Relevant range of step fixed costs is narrow. The narrower the relevant range, the sooner the cost jumps from one amount to the next

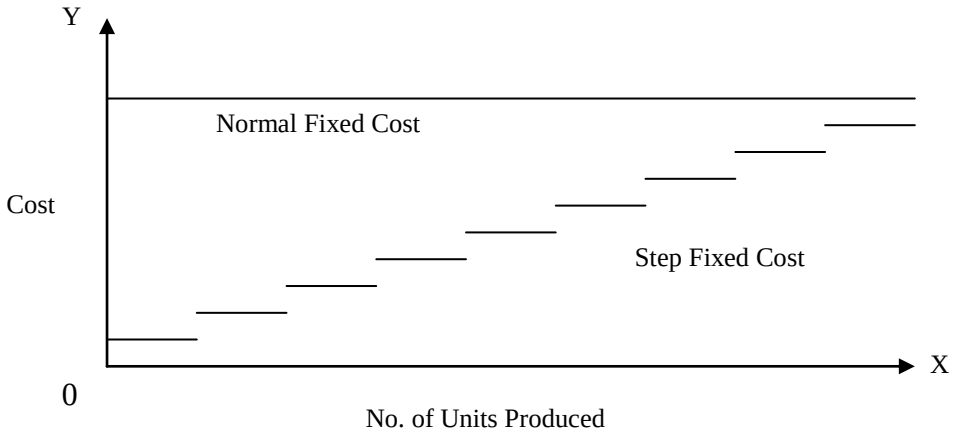



**Figure 2-3: Total Fixed Cost and Step Fixed Cost**

**c) Semi Variable Costs**

All costs, other than fully variable and fixed, which are neither perfectly variable nor absolutely fixed in relation to volume changes, are semi-variable costs. It is also known as semi-fixed or mixed costs as they consist both of fixed and variable costs. The variability

of semi-variable expenses is caused by the combined effect of 1) passage of time 2) activity or output 3) discretionary management decision. Semi-variable costs remain fixed to a certain extent and thereafter these vary with the increase in output or activity levels.

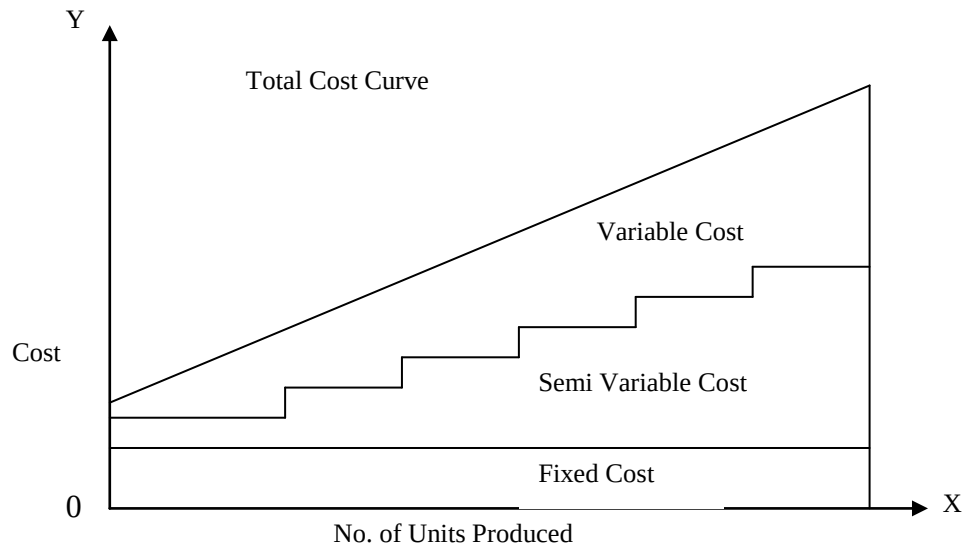



**Figure 2-4: Total Cost Curve**

**Segregation of Semi-Variable Cost**

There are various types of method to break mixed cost into variable and fixed. But in practice high-low method and least-square method are mostly used.

**a) High - Low Method**

In the high-low point method the semi variable cost is segregated into fixed and the variable components using exactly two data points. The two points consists of selecting the periods of highest and lowest activity levels comprising the changes in cost that result from the two levels.

$$\text{Variable Cost Per Unit (VCPU)} = \frac{\text{High Cost - Low Cost}}{\text{High Activity - Low Activity}}$$

$$= \frac{\text{Change in Cost}}{\text{Change in Activity}}$$

$$\text{Fixed Cost Per Period} = \text{Total Cost} - \text{VCPU} \times \text{Activity Volume}$$

**b) Least-Square Regression Method**

The term least square means that the sum of the squares of the deviations from the plotted points to the regression line is smaller, that would be obtained from any other line fitted to the data. So that in trend line analysis drawn from the relationship be-

tween the independent and dependent variables. The least square straight-line trend gives more reliable estimate than any other methods. In cost estimation in relation to activity levels, activity volumes are defined as independent variable (X) and the mixed costs relating to that activity as dependant variable (Y). Then the amount of dependent variable or cost (Y) for any level of independent variable or production (X) can be explained through following least square straight line:

Least square straight line Y on X

$Y = a + b X$

Where,

a = Fixed cost per period

b = Variable cost per unit

n = Number of observations

X = Activity measures (units or hours)

Y = Total mixed cost observed

Value of 'a' and 'b' can be directly estimated using simple mathematical formula.

$$b = \frac{n \Sigma XY - \Sigma X \Sigma Y}{n \Sigma X^2 - (\Sigma X)^2} \quad \text{and,} \quad a = \frac{\Sigma Y}{n} - b \frac{\Sigma X}{n}$$

## 2.6 Absorption Costing and Variable Costing

### a) Absorption Costing

Absorption costing is that method of inventory costing in which all variable manufacturing costs and all fixed manufacturing costs are included as inventorial costs. That is, inventory 'absorbs' all manufacturing costs. Absorption costing is also termed as 'Conventional Costing' or 'Full Costing'. Fixed manufacturing overhead costs are included in costs of goods sold on these absorption costing income statements. The only period expenses are the selling and the administrative expenses.

### b) Variable Costing

Variable costing is that method of inventory costing in which all variable manufacturing costs are included as inventorial costs. All fixed manufacturing costs are excluded from inventorial costs. They are instead treated as costs of period in which they are incurred. Variable costing is a method of recording and reporting costs, which regards as product costs only those manufacturing costs, which tend to vary directly with the volume of activity. Variable costing is also termed as 'Direct Costing' or 'Marginal Costing'.

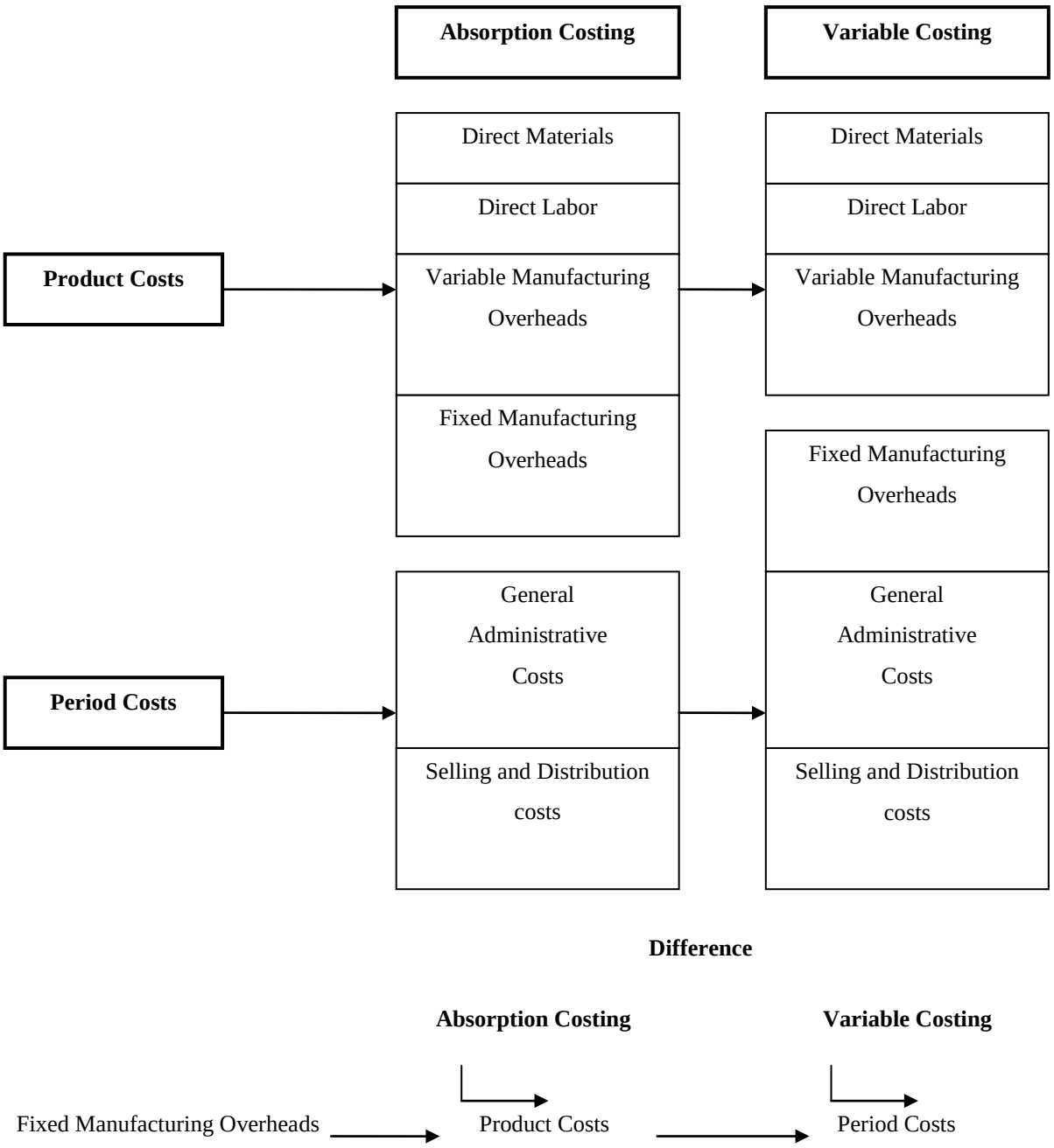



**Figure 2-5: Fundamental Concept of Absorption Costing and Variable Costing**

Absorption costing is more widely used than variable costing. However, the growing use of the contribution approach in performance measurement and cost analysis has led to an increasing use of variable costing for internal reporting purposes. The beauty of variable costing is to build-up the Cost-Volume-Profit Analysis. Variable costing clearly distinguishes the costs into variable and fixed ones. Variable costs, which really vary with the volume of sales, are taken as product costs and all fixed overheads are taker as period costs. Once the cost-volume-profit relationships are built, it becomes straight to develop

the profit plans. Variable costing has contributed to develop the following Cost-Volume-Profit Analysis relationship equation:

$$\mathbf{Q \times P = FC + Q \times UVC + Profit}$$

Where, Q = Sales Volume

P = Selling Price per Unit

FC = Total Fixed Overheads

UVC = Per Unit Variable Cost

## 2.7 Contribution Margin Analysis

Contribution Margin is the excess of sales revenue over variable costs, so contribution margin means how much is left from sales revenue after covering variable expenses that are contributed toward profit for the period. Contribution margin is used to first cover the fixed expenses and then whatever remains, after the fixed expenses are covered, goes toward profit. If the contribution margin is not sufficient to cover the fixed expenses then a loss occurs for the period. Basically contribution margin indicates why operating income changes as the volume of sales changes. It can be expressed as:

Contribution Margin = Sales – Variable Cost

or, Contribution Margin = Fixed Cost + Profit

Contribution Margin Per unit (CMPU) = Selling price – Variable cost per unit

$$\text{or, CMPU} = \frac{\text{Contribution Margin}}{\text{Sales Units}}$$

### 2.7.1 Contribution Margin Ratio (C/M Ratio)

Contribution Margin Ratio (C/M Ratio) is also known as profit volume ratio (P/V Ratio). C/M Ratio is equal to contribution margin divided by sales revenue. The analysis of relationship between profit & volume is known as profit volume analysis, profit volume ratio (P/V ratio) or C/M ratio establishes a relationship between the contribution & sales value. Percentage of contribution margin to total sales is referred to as the C/M ratio. C/M ratio can be calculated by using either per unit or total revenue minus total variable cost.

$$\text{C/M Ratio} = \frac{\text{CM}}{\text{Sales Revenue}} \text{ or, } \frac{\text{CMPU}}{\text{Sales Revenue}} \text{ or, } 1 - \frac{\text{VC}}{\text{Sales Revenue}}$$

$$\text{or, } 1 - \frac{\text{VCPU}}{\text{SPPU}} \text{ or, 1 – Cost Volume Ratio}$$

$$\text{or, } \frac{\text{Difference in Profit i.e. Contribution Margin}}{\text{Difference in Sales Revenue}}$$

## 2.8 Break Even Analysis

Break even analysis, more precisely the breakeven point, tells the quantity sales sold at which total sales revenues equal total costs. In other words, breakeven point is that quantity of output sold at which the operation income is zero. Cost-Volume-Profit Analysis is sometimes referred to simply as a break-even analysis. This may be misleading because break-even analysis is just one aspect of the entire CVP concept. It is always taken as an important aspect of profit planning as it gives the planner many insights into the data with which he or she is working. Profit planning of each firm begins from break even analysis. Profit begins from the breakeven point. It is survival point where all firms must at least remain to sustain or continue the business. *[Bajracharya, Ojha, Goet and Sharma, 2005:230]*

### 2.8.1 Approaches to Break-Even Analysis

The breakeven point can be identified through different approaches. Mainly, the breakeven point and other required cost volume profit relationships can be explained through contribution margin approaches or graphic approach or equation/formula approach. A contribution margins statement is a variable costing income statement where philosophy is that all fixed costs are period cost which should be deducted from the contribution margin of the same period. Most often, the equations approach can be used to identify break even sales instead of the graph or the income statement.

**a) Contribution Margin Approach**

The contribution margin approach to CVP Analysis allows the preparation of proforma statement from the available information. BEP and other required CVP relationships can be explained through a contribution margin statement. A contribution margin statement is the variable costing income statement whose philosophy is that all fixed costs are period costs that should be deducted from the contribution margin of the same period. Only the variable costs vary proportionately with the level of output or sales.

| | |
|---|---|
| Sales Revenue | ×××× (BE Sales Rs.) |
| Less: Variable Cost | ×××× |
| Contribution Margin | ×××× |
| Less: Fixed Cost | ×××× |
| Profit | Nil |

*[Ojha and Gautam, 2008:312]*

**b) Formula Approach / Algebraic Equation Approach**

The most popular practiced approach to the break-even point and Cost-Volume-Profit Analysis is the formula, also known as the equation. It is particularly because the equation provides the most general-and the easiest to remember-approach to any cost-volume-profit situation. The formula approach uses an algebraic equation to calculate the break even point. The answer provided by solving the equation may, sometimes, need to be rounded to whole numbers of units or lot sizes. The rounding of break even point units is always dine upward because this will provide a small profit rather than the small loss that would be shown from rounding downward. [Rainbom, Barfield and Kinney, 1993:124]

The calculation in the equation approach is similar to that of the contribution margin statement approach. The equation is merely a resettlement of expenses and contribution margin. The equation is merely a restatement of the other.

**Table 2-1: Cost-Volume-Profit Equations**

| Contribution Margin Income Statement | Symbol for Equation |
|---|---|
| Sales Volume (Units) | Q |
| Selling Price Per Unit | P |
| Sales Revenue (Rs.) | Q × P |
| Less: Variable Costs | Q × VCPU |
| Contribution Margin | Q × P – Q × VCPU |
| Less: Fixed Costs | Fixed Cost |
| Net Profit | Q × P – Q × VCPU – Fixed Cost |

*[Bajracharya, Ojha, Goet and Sharma, 2005:233]*

Sales – Variable expenses – fixed expenses = Net profit

or, Sales = Variable expenses + Fixed Cost + Net Profit

or, Q × P = Q × VCPU + Fixed Cost + Profit

Sales volume for break-even point (BEP):

$$\text{BEP (in Units)} = \frac{\text{Fixed Cost}}{\text{CMPU}}, \text{ and BEP (in Rs.)} = \frac{\text{Fixed Cost}}{\text{C/M Ratio}}$$

BEP sales in Rs. – Variable Cost – Fixed Cost = 0

Sales volume for desired profit:

$$\text{Required Sales (in Units)} = \frac{\text{Fixed Cost + Target Profit}}{\text{CMPU}}$$

$$\text{Required Sales (in Rs.)} = \frac{\text{Fixed Cost + Target Profit}}{\text{C/M Ratio}}$$

Sales volume for desired profit after tax:

$$\text{Required Sales (in Units)} = \frac{\text{Fixed Cost} + \dfrac{\text{DPAT}}{1 - \text{Tax Rate}}}{\text{CMPU}}$$

$$\text{Required Sales (in Rs.)} = \frac{\text{Fixed Cost} + \dfrac{\text{DPAT}}{1 - \text{Tax Rate}}}{\text{C/M Ratio}}$$

The contribution margin & equation approaches are two equivalent techniques for finding the BEP. Both methods provide the same conclusion, so, personal preference decides which approach should be used. Yet it is especially useful in situation in which unit price and unit variable costs are not clearly identifiable.

**c) The Graphic Approach**

The BEP can also be computed graphically. A break-even chart portrays a pictorial view of the relationship between costs, volume, and profit. The BEP indicates in the chart will be one at which the total cost line and total sales line intersect.

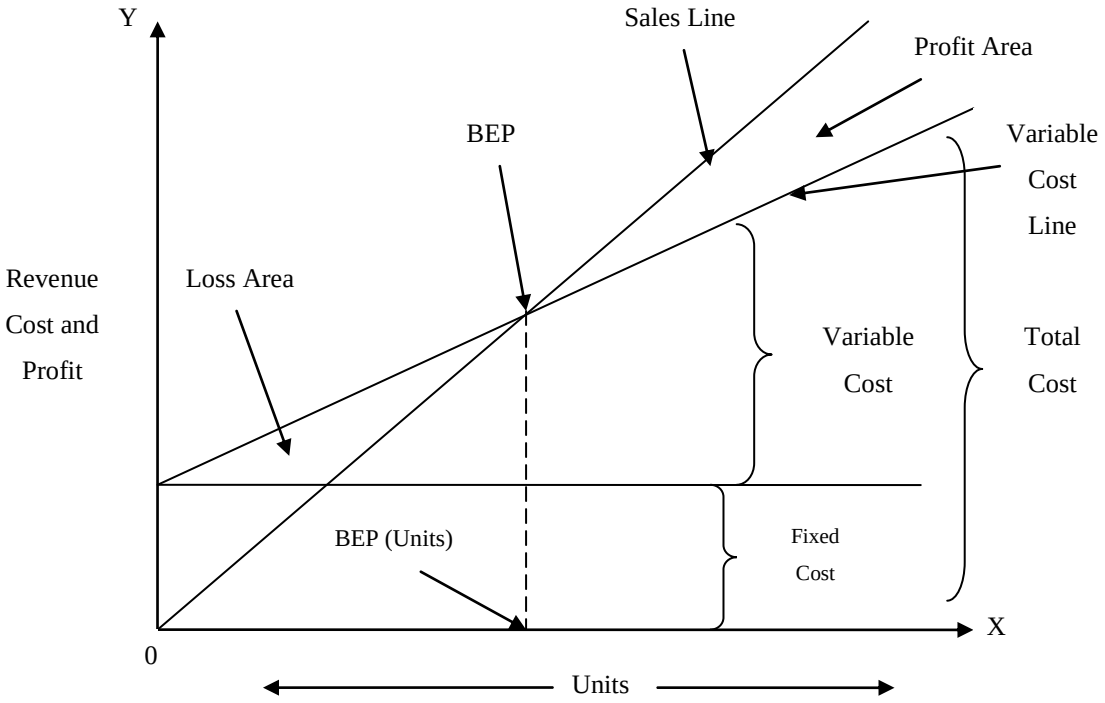



**Figure 2-6: Break-Even Point Chart**

The point of intersection between sales and total cost lines is the BEP. The angle formed by the intersection of sales and total costs lines is known as the angle of incidence. Larges this angle, lower the BEP and vice-versa. The area to the left of the BEP is the loss area and represents the uncovered fixed costs while to the right of it, there is the profit area. The variable cost is the gap between the total cost and the fixed cost. BEP can be computed by contribution approach as:

- Break-even Line: The break even line, parallel to the horizontal axis can be drawn through the zero contribution point.
- Fixed Cost: The fixed are located in the negative vertical line.
- Contribution Line: It is drawn from the fixed cost point and forwarded by intersecting BE line where BEP lies.

**Cash Break-Even Point**

Break-even point tells what volume of sales is required to cover all operating expenses. But, fixed costs include certain non-cash expenses like depreciation and amortization, for which no cash is needed in the short-run. Therefore, the company can pay its cash bills even if it does not generate sales equal to BEP in the short-run. If only the cash costs are included in fixed costs we can get cash BEP.

$$\text{Cash BEP (in Units)} = \frac{\text{Fixed Cost - Non-cash Expenses}}{\text{SPPU - VCPU or CMPU}}$$

$$\text{Cash BEP (in Rs.)} = \frac{\text{Fixed Cost - Non-cash Expenses}}{\text{C/M Ratio}}$$

**Step or Jumping Fixed Cost and Multiple BEP**

Break-even point is determined by dividing the fixed costs by the contribution margin per unit. If the fixed cost is jumping like a ladder (i.e. step fixed) then it is required to consider a different amount of fixed cost corresponding to each step. As such, BEP is computed for each level of fixed cost. Some of these computed BEP may not be feasible because they may violate the limits imposed by the relevant range corresponding to the level of fixed costs considered in their computation. As a result real or actual BEP is determined through Trial and Error approach. *[Munankarmi, 2003:136]*

### 2.8.2 Application of Break even Analysis

Break even concept can be used to formulate different policies in a business enterprise. Some of the applications are:

- Determination of Profit at different level of sales and margin of safety.
- To find the level of output to get the desisted profit.
- Effect of price reduction on sales volume and changes in sale mix.
- Effect of fixed cost or variable cost changes on sales volume.
- Selection of most profitable alternative, make or buy decision and drop and or add decisions. *[Maheshwari, 2000:182]*

### 2.8.3 Assumption of Break Even Analysis

Contribution analysis and break even analysis are based on a specific set of assumptions that should be clearly understood. These underlying assumptions are:

- All cost can be classified into two parts; fixed cost and variable cost, there are no costs other than fixed and variable.
- There is a relevant range of validity (Activity) for using the result s of the analysis and sales change.
- There is only one product or in case of multi products, the sales mix among the products remains constant.
- Basic management policy about operation will not change materially in short run.
- The general price level (Inflation defilation) will remain essentially stable in the short run.
- Sales and production levels are synchronized, that is inventory remains essentially constant or zero.
- Efficiency and productivity per person will remain essentially unchanged in the short run. *[Maheshwari, 2000:182]*

If any of the above assumption were changed, revised budget would be needed for a new analysis.

### 2.8.4 Limitation of Break-even Analysis

Break even analysis in many business situations can be used for effective decision making but there are many short comings or limitations in its analysis and interpretations. Some of these can be listed as:

- The assumptions of producer's market phenomenon not hold goods for all types of commodities.
- The fixed cost may remain constant as well as the variable costs may not vary and fixed proportions at different levels of output.
- With variation in the prices of the items or services which also depend on the factors affecting the demand and supply will certainly affect the demand of the commodity. This phenomenon is not covered in even analysis.
- Identification of fixed and variable costs involved in production process is very complicated. A shift in product mix may change the break even point.

Customers may be given certain discount on purchase to promote sales. This revenue may not be perfectly variable with level of sales output. *[Maheswari, 2000: 183]*

## 2.9 Margin of Safety

The margin of safety is the excess of budget or actual sales over the break-even sales volume. It states the amount by which sales can drop before losses begin to be incurred in an organization. The higher the margin of safety, the safer is the business. For example, if the ratio of the margin of safety to the projected sales is 40 percent, the firm will cover its fixed cost burden at 60 percent of the projected sales. The firm will earn profit equal to the contribution margin of 40 percent of the expected sales. The margin of safety can be expressed as units, value or a percentage. Formulae are:

Margin of Safety = Actual sales – BE sales (Units & Value)

$$\text{Margin of Safety (in Units)} = \frac{\text{Profit}}{\text{CMPU}}$$

$$\text{Margin of Safety (in Rs.)} = \frac{\text{Profit}}{\text{P/V Ratio}}$$

$$\text{Margin of Safety Ratio} = \frac{\text{Actual Sales - BE Sales}}{\text{Actual Sales}}$$

$$\text{Margin of Safety Ratio} = \frac{\text{Margin of Safety}}{\text{Actual Sales}} \times 100$$

The larger is the safety margin the greater the chance for the company to earn profit i.e. larger the margin of safety safer the company. A high margin of safety is particularly significant in times of depression when the demand for the company's or firm's product is falling. Low margin of safety may result of firm which has low contribution ratio. When both the margin of safety may result of firm which has low contribution ratio are low, management should think the possibilities of increasing the selling price it does not ad-

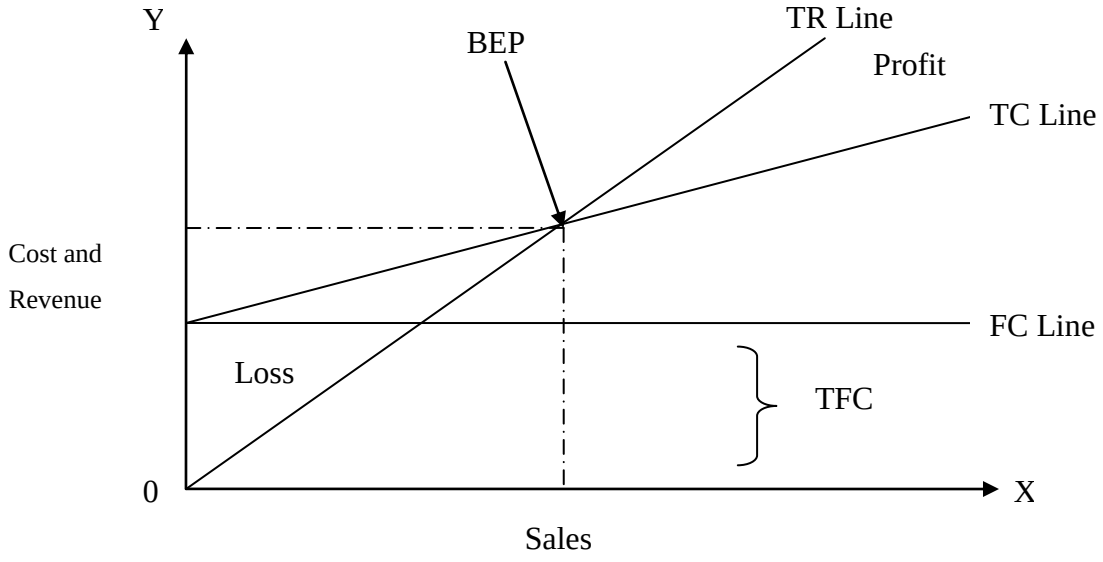
versely affect the sales volume or reducing variables costs by bringing improvement in manufacturing process. *[Munakarmi, 2003:407]*

The following steps are needed to rectify margin of safety:

- With increasing selling price.
- With increasing sales volume, if the capacity of fixed cost is not fully utilized.
- With reducing fixed cost if possible.
- With reducing variable cost (with reducing the cost of raw materials, wedges and other direct cost).
- With substituting product like by more profitable one.

## 2.10 Economic Characteristics of Cost-Volume-Profit Analysis

Where volume profit analysis cost is reasonable accurate, they can help management decision making. Essentially, CVP Analysis offer greater insight into the economic characteristics of a company and may be used to determine the approximate effect of various alternatives. CVP Analysis is based on estimates, however, the alternatives. CVP Analysis is based on estimates, however, the arithmetical manipulations generally involve averages, and hence the result should never be interpreted as precise. Rather, the analysis may be characterized approximately as a 'slide-rule' approach that may be used to develop and test, with a minimum of effort, the approximate effect on costs and profits or several types of management decisions. [Welsch, 1979:467]




*(Source: Welsch, 1979)*

**Figure 2-7: Break-Even Chart**

Above breakeven chart with economic characteristic indicate few of the economic characteristics of a business, which are:

- Fixed cost, variable costs and total coasts at varying volumes.
- The profit and loss potential before & after income taxes at varying volumes.
- The margin of safety is the relationship of budget volume to break even volume.
- The preferred dividend or danger point the point below which preferred dividends are not earned.
- The deal point, the point where management earns only the "going" rate on the investment.
- The common dividend or unhealthy points below earnings are insufficient to pay the preferred dividend and the expected dividend on the common stock. [Welsch, 1979:468]

All these points and as other can be completed if data are developed for cost volume profit purpose.

### 2.10.1 Cost-Volume-Profit Analysis for Multi Product Firms

Sale mix can be defined as the relative combination of two or more product represented in total. It is not only the sales revenue that makes profit. The proportion of sales contributed by different product greatly changes the amount of profit. Managers try to achiever that combination or mix that will yield the greatest amount of profit. If a company sells more than one product, these may not be equally profitable. So, the company's profit will depend upon the ratio of each products sale to total sales revenues. Profit will be greater if high margin item make up a relatively large proportion of total sales than if sales consist mostly of low margin items. Changes in sales mix can cause great variations in a company's profit. A shift to low margin item can cause the total profit to decrease even though total sales increase on the contrary, a shift in the sales mix from low margin items to high margin item can cause the reserve effect total profit may increase even though total sales decrease. *[Bajracharya, Ojha, Goet & Sharma, 2005:260]*

To calculate BEP for sales mix or multi products:

- Calculate contribution margin or profit volume ratio for each product.
- Calculate production of sale mix in units or values are as follows:

- Sales Mix = $\frac{\text{Total of All Products' Sales Units or Values}}{\text{Individual Product's Sales Units or Values}}$

- Calculate weighted average for all products as follows:
  - Weighted Average CMPU = Σ Units Sales Mix × CMPU
  - Weighted Average C/M Ratio = Σ Values Sales Mix × P/V Ratio
- Calculate of Break-even point (BEP):

$$\text{Break-even Point (in Units)} = \frac{\text{Total Fixed Cost}}{\text{Weighted Average CMPU}}$$

$$\text{Break-Even Point (in Rs.)} = \frac{\text{Total Fixed Cost}}{\text{Weighted Average C/M Ratio}}$$

### 2.10.2 Cost-Volume-Profit Analysis and Limiting Factors

Because of some critical factors like, raw materials or labor or finishing machine the firm cannot produce any number of output of it choices. So, profit planning & decision making of the firm will affect while CVP Analysis is done.

### 2.10.3 CVP Analysis with a Single Constraint

Scarce resources should be efficiently allocated in order to maximize the contribution margin. A particulars simple and instructive situation arises when there is only one constraining resource. This occur if the firm products are all produced on a single machine and output is limited by hours available on this machine. In the same way, single resource constraint for a scarce resource to have alternative uses. Then the available capacity for such scarce resource should be allocated to the alternative uses on the basis of contribution pre scarce resource. [Munakarmi, 2003:146]

### 2.10.4 CVP Analysis with Multiple Constraints

Where more than one scarce resource exists, the optimum production programmed can't easily be established by the simple process applied in single resource constraint. Under the circumstances simple allocation of resource or the basis of contribution margin per unit is neither feasible nor desirable. Contribution margin per unit of scared resource may be different for different ranking of product, because production processes are affected by many constrains factors rather than single constraint. In such situation, linear programming technique may used to optimize product mix. The linear programming formulation is required to determine a production plan which maximizes contribution from the product mix Linear

Programming is mathematical technique which shows how to arrive the optimum results, allocation available resources in a meaningful manner. It is basically concerned with the problem of allocating limit resources among competitive activities in an optimum manner. It is a technique to optimize the allocation of scarce resources in product mix problems which provides a valuable extension to Cost-Volume-Profit Analysis. [Munakarmi, 2003:148]\

### 2.10.5 CVP Analysis under Condition of Uncertainty

CVP Analysis can be used for various purposes such as choosing between machine and products, planning of profit and mist significant fixing up of selling price. Management uses this as a convenient tool of profit planning with giving consideration of risk and uncertainty involved in it.

Although, margin of safety ratio explains the degree of sensitivity of the project and product in general but it fails to explain certainty of the product and also between the alternatives .To overcome such a difficulty risk and uncertainty analysis like in any other management decision making can also be used in CVP Analysis. The objective in CVP Analysis under condition of uncertainty is to assess the probability distribution of the profit volume under given distribution of one or more factors, sales price or profits.

Profitability distribution approach is a simple statistical tool which may be used to measure the risk and uncertainty involved in CVP Analysis. A probability distribution theory normally suggests for postulation of various possibility of happening of the event in consideration. This may be done either taking into considerations of the experience in the pat or may be done by considering the personal intuition of the persons doing so. In business reference of past experience are hardly available not a person is likely to behave in the same manner in the similar situation in different time. Therefore, personal judgments plays significant role in the management decision making. The conditions thus postulated are assigned probability (i.e. ones judgments towards likeliness of happening of the condition forecasted). It must be understood that probability assigned here is a subjective probability based in personal judgments of the man making such an analysis. [Pandey, 2003: 17]

### 2.10.6 Special Problems in CVP Analysis

Cost-Volume-Profit Analysis is applied to individual products or parts of a business and all the product or activities combined. In later case, there are three special problems may be encountered.

a) Selection of suitable activity base
b) Inventory changes
**c)** Non-operating incomes and expenses

**a) Activity base**

When two or more products or activities are combined for break even analysis the activity base must be in additive units using a common denominator of volume or output in multiple products. Therefore for the company as a whole, net sales amount are usually the only satisfactory common denominator because manufacturing, selling and administrative activities are expressed in combination.

**b) Inventory changes**

Usually the budgeted changes in inventories (i.e. finished goods and work in progress) are in material in amount and thus may be disregarded in cost volume profit analysis. On the other hand, when the change in budgeted inventory is significant, it should be included in the analysis. Including the effect f inventory changes in CVP Analysis requires subjective judgment about what management might do (about making inventory changes) at different volume, levels and the conceptual precision that is desired. Management considers two practical approaches or policies in inventory changes of used a) Disregard and inventory changes, and b) include the inventory changes.

**c) Non-operating incomes and expenses**

Non-operating incomes (gains) and expenses (losses), and extraordinary gains and losses, if material in amount, cause another problem in Cost-Volume-Profit Analysis. The basic issue is whether they should be included or excluded. Extraordinary gains and losses are nonrecurring and unusual; therefore, they should be excluded. Not-operating incomes (gains) and expenses (losses) are recurring, but they are not related to ongoing operations. For example, interest income and expense, and gains and losses on the sale of operational (fixed) assets, are viewed as non-operational items. Usually

they are excluded from Cost-Volume-Profit Analysis. However, if they are included, it is preferable to include the net of other income and other expenses. If the excess is expense, it should be added to fixed expense; whereas if the excess is income, it should be deducted from the fixed expense

## 2.11 Sensitivity Analysis

Sensitivity analysis is the measurement of elasticity of the change in CVP factors in break-even point or given profit. The strategist should focus more on the factor, which is more sensitive or responsive for profit. To measure the sensitivity of CVP factors one can see the impact of certain percentage or amount change in volume, price, or cost factors on net profit. In other word, sensitivity analysis is the measurement of responsiveness in outcome with the changes in determinant variables. We know that the goal of a business enterprise is to maximize profit. Profit is the excess of revenue over the total costs.

Net Profit = Total sales revenue-Total costs

Net profit = Sales units × SPPU – Sales units × VCPU – fixed cost – Taxes

So that,

Profit = f (sales volume, selling price, VC, FC, taxes, etc.)

Means, profit is the function of volume, price, VC, FC, Taxes and so on.

But none of the factors remain unchanged. Sometimes the manager can intentionally change the price and cost factors as a part of strategic decision. But the strategy should focus more on the factor, which is the more sensitive or responsive for profit. So, to measure the sensitivity of CVP factors, we can see the impact of certain percentage or amount change in volume, price or cost factors on net profit. *[Bajracharaya, Ojha, Goet & Sharma, 2005:245]*

### 2.11.1 Risk Measurement: The Operating Leverage and Break Even Point

Operating leverage tells us how profit change with the change in sales. It is evident that profit changes more rapidly than sales. Why do profit change more rapidly than the sales? It is because some costs do not change. Say if sales decline, variable costs also decline in the same ratio so that contribution margin also decline proportionately. But fixed costs do not decline. So the net operating income decline more rapidly. The some thing applies in the case of increase well. Sales revenues changes but some parts of costs, known as fixed

costs, remain unchanged. That is why net operating income changes more rapidly. This change is called the operating leverage.

Operating leverage can be measured in terms of the "Degree of operating leverage (DOL)". A DOL shows the times of percentage change in net operating income of the given percentage change in sales. DOL may be defined as the percentage change in net operating income (NOI) or EBIT associated with a given percentage change in sales.

$$\text{DOL} = \frac{\text{Percentage Change in Net Operating Income or EBIT}}{\text{Percentage Change in Sales}}$$

Alternatively;

$$\text{DOL} = \frac{\text{Contribution Margin}}{\text{Net Operating Income}}$$

$$\text{DOL} = \frac{\text{Q (SP - VCPU)}}{\text{Q (SP - VCPU) - Fixed Cost}}$$

Where, Q = Total demand in unites

SP= Selling price per unit

VCPU = Variable cost per unit

As we know,

$$\text{BEP (in Units)} = \frac{\text{Fixed Cost}}{\text{SP - VCPU}}$$

Leverage decision is meant to substitute variable cost by the fixed costs. To create a degree of operating leverage means the employment of higher amount of fixed cost, which eventually increases the breakeven point also. No DOL is to be said when the DOL occur '1' and in this situation BEP comes to 'Zero'.

Higher fixed costs increase the DOL and they also increase the breakeven point, so there is close relationship between the degree of operating leverage and the breakeven point. A high DOL and high BEP both are the indicators of higher risk. *[Bajracharya, Ojha, Goet and Sharma, 2005:248]*

### 2.11.2 Impact of Changes on Profits

Profit is the functions of variety of factor; it is affected by changes in volume, costs and price. Profit may be affected by the changes in the following factors:

**Effect of Price Changes:**

An increase in the selling price will increase the P/V ratio and, as a result, will lower the breakeven point. On the contrary, a decrease in selling price will reduce the P/V ratio and therefore, result in the higher breakeven point.

**Effect on Volume Changes:**

Changes in volume, not accompanied with the changes in the selling price and or costs, will not affect P/V ratio. As a result, the breakeven point remains unchanged. Profit will increase with an increase in volume and will reduce with a decrease in volume.

**Effect of Price and Volume Changes:**

A change in price invariably affects volume. A price reduction may increase demand of the product and consequently, may result in increased volume. On the other hand, increase in price may adversely affect the demand and thus, reduce volume. The impact on profits under these circumstances is not obvious. Profit may increase with a price reduction if volume increases substantially. Similarly, a price raise may reduce profits if there is material fall in volume.

**Effect of Changes in Variables Costs:** The effect of the changes in variable costs on profits is straight forward if it does not cause any change in selling price and or volume.

An increase in variable costs will lower the P/V ratio, push up the BEP and reduce profits. On the other hand, if the variable costs decline, P/V ratio will increase, BEP will be lowered and profit would rise.

**Effect of Changes in Fixed Costs:**

A change in fixed cost does not influence P/V ratio. Other factors remaining unchanged, a fall in the fixed cost will, however lower the BEP and raise profits. An increase in fixed cost caused either due to some external factors or due to some changes in the management policy, will raise the BEP. Increase in factory rent or insurance and taxes are example of external factors, while increase in deprecation or salaries of managers may be the result of management decisions.

**Effects of Changes in a Combination of Factors:**

The financial manager or the management accountant, evaluating the profit plans or budgets, must realize that a change in one factors leads to a change in another factors. Therefore, all such changes should be carefully visualized and their net impact on profit must be seen. *[Pandey, 1999:203]*

## 2.12 Review of Previous Studies

Review of literature is an essential part of all studies. It is way discover what other research in the area of our problem has uncovered. It is also a way to avoid investigating problems that have already been definitely answered. Review of literature provides the foundation for developing a comprehensive theoretical frame work. It also minimizes the risk of pursuing the dead ends in research. As profit planning and control and management accounting covers major of the aspects of Cost-Volume-Profit Analysis, researchers made on these areas are taken into consideration for the sake of review to examine how profit planning and control and management accounting practices in Nepalese companies. Many of the researches have been made on manufacturing concerns and except a few most of them are not profound. An attempt is made here to review some of the researchers, which have been submitted on CVP Analysis as a tool of profit planning and control and management accounting in the context of Nepalese public enterprises.

**Guragain, (2010),** had conducted a research entitled; **"A study on Cost Volume Profit Analysis (***A case study on Kantipur Publication Ltd.***)"** this was submitted to Faculty of Management Tribhuvan University in the partial fulfillment of Degree of Master of Business Studies in the year 2010. This study concerned to Cost volume profit analysis of Kantipur Publication Pvt. Ltd. In this study the she mostly used secondary data from the FY 2061/62-2065/66, and findings from the study are follows;

- Sales of company is in increasing every year in fluctuating rate, the company forecast sales for FY 2066/67 is Rs 6,26,36,877.00
- Total Variable cost ratio was not constant because higher portion of variable cost includes cost of materials which covers nearly 80% of average sales.
- Fixed cost did not remain constant if different fiscal year.
- There is no proper coordination among production, administration, distribution, store and sales department.

- Profit of the company is fluctuated in every year. Though sales decrease in the same year. Profit increase due to decrease on fixed cost.
- Contribution margin and profit volume ratio were in increasing trend. It is very low due to huge amount of variable cost.

**Shrestha, (2009),** had conducted a research entitled "**Cost-Volume-Profit Analysis of Nepal Aushadhi Limited.**" submitted to Faculty of Management Tribuvan University in the partial fulfillment of Degree of Master in the year 2009. This study was to examine the use of CVP Analysis to plan the profit in NAL. The findings from the study are as follows:

- Sales plan of NAL is not properly maintained. The industry did not use scientific method of sales planning.
- There is significant different between budgeted sales and actual sales of the industry.
- NAL did not practice the scientific and appropriate cost classification technique. Costs were classified into fixed and variable as per the decision of the top level management.
- Break-Even sales were more than actual sales. The industry was suffering from huge loss every year.
- Contribution margin of NAL is very low.
- MOS of NAL is negative in every years, the industry might be bearing high risk.
- The profitability of NAL is very poor. Every year the NAL is suffering losses.
- NAL is utilizing only 40% capacity.
- Top level managers set the goal but these goals and objectives are not clearly communicated to the lower level management.
- The industry is facing problem of poor communication among production, administration, technical, marketing and finance department.
- As the degree of operating leverage is negative in every year. It suffers huge amount of loss even if the sales revenue decrease slightly.
- The industry is facing the problem of raw materials dependency and the fluctuation international price. Sometimes it also faces the problem of raw material scarcity as well and very tough competition market.

**Gurung, (2008),** had conducted a research entitled "**Cost-Volume-Profit Analysis of Public Enterprises of Nepal (***A comparative analysis between Nepal Telecom and Nepal Electricity Authority)*". This was submitted to Faculty of Management, Tribuvan University in the partial fulfillment of Degree of Master in Business Studies. The findings from the study are as follows:

- Segregation of fixed and variable cost is ignored by both enterprises. Cost-Volume-Profit Analysis is not plasticizing by these enterprises no any method has been adapted to segregate cost into fixed or variable.
- Actual operating income of the NTC is increasing in fluctuation of trend.
- Variable cost of NTC is very less compare to its fixed cost and contribution margin ratio of NTC is very high. But NEA has variable cost and its contribution margin ratio is less.
- NTC is running in profit but NEA is suffering from less. No any systematic plans have been implemented for preventing the loss and improve profit of these enterprises.
- Fixed cost of NTC is high in the comparison to variable cost. Employee cost and administration expenses are high. In NEA fixed cost like interest and depreciation are high. Long term loan in NEA are the main cause in increase interest.
- High PV ratio of NTC reduced the breakeven level of the company where as NEA has less PV ratio and BEP sales are more. As a result NTC is earning profit but NEA is suffering loss.
- MOS of NTC is in good position whereas NEA is in negative.

**Adhikari, (2008),** has conducted a research entitled "**A Study on Cost-Volume-Profit Analysis as a Managerial Tool to Plan Profit of Bottlers Nepal Ltd.**" Mr. Adhikari had concerned his study to examine the use and effectiveness of CVP Analysis as a managerial tool in Nepalese manufacturing companies. This was submitted to Shanker Dev Campus, Tribuvan University in the partial fulfillment of Degree of Master in the year 2008. The study covered a five year period from fiscal year 2002/03 to 2006/07. The main remarkable findings were as follows:

- BNL has only sales and production plan.
- Sales and production targets are not achieving because there is not an effective forecasting system.

- The profit trend of the company was not satisfactory. As compared to profit proportion was very low with fluctuated trend.
- There is no any effective plan for cost reduction and control.
- The profit trend of the company is not satisfactory. As compared to profit, proportion is very low with fluctuated trend.
- The company has no detailed and systematic expenses plan. The fixed, variable and mixed expenses plan is the necessary elements for profit planning and control.
- In the company, there is no effective inventory policy. The inventory management, raw-material handing and controlling system are not efficient and effective.
- BNL has not proper practice or segregating the costs into fixed and variable or controllable and non-controllable.
- There are no any proper criteria for performance evaluation for financial tools.
- Decision making powers were centralized.

**Sharma, (2002)** has conducted a research entitled **"Management Accounting Practices in listed companies of Nepal"**. He has focused his study to examine and study the practice of management accounting tools in the listed companies of Nepal. Mr. Sharma's research study is based only on primary data. Stratified random sampling with proportionate allocation of percentage is followed to draw the sample. In his study, he has pointed out various findings and recommendations which are as follows:

Different types of management accounting tools which are taught in the colleges are not found applied by the listed companies of Nepal.

Management accounting is to help managers in overall managerial activities

By providing information and helping in planning, controlling and decision making.

Nepalese listed companies are in infant stage in practicing of management accounting tools such as capital budgeting, annual budgeting, cash flow, ration analysis, zero based budgeting, activity costing, target costing and value engineering.

Lack of information and extra cost burden are the main reason behind not practicing such tools.

## 2.13 Research Gap

There is a significant gap between present research work and the previous research works. There are hundreds of researches which are conducted mainly on profit planning and control and management accounting of Public enterprises. In most of the researches, profit planning tools are analyzed in one way or the other but their impact are rarely explained comparatively. Cost- Volume-Profit analysis and the sensitivity of their variables in modern business is a current issue but these facts are rarely studied by the previous researcher. To fill this gap, the researcher is intended whole heartedly to conduct this research. For this purpose the researcher will examine the current practice of Cost-Volume-Profit analysis in the Kantipur Publication & Gorkhapatra Corporation comparatively, Probably, it is the first thesis which deeply studies the CVP analysis of Private Company Limited & public company.

# CHAPTER-III

# RESEARCH METHODOLOGY

## 3.1 Introduction

Research is the process of a systematic and in-depth study or search of any particular topic, subject or area of investigation backed by the collection, complication, presentation and interpretation of the relevant details or data. It is a careful search or inquiry into any subject matter, which is an endeavourer to discover or find out valuable facts, which will be use full for further application or utilization. The research that involves the discovery of new techniques, a modification of old concepts or a knocking off an existing theories, concepts and techniques. It may develop a hypothesis and test it by establishing relationship between different variables and identify the means for problem solving.

Research methodology is a systematic way to solve the research problem. In other words research methodology describes the methods and process applied in the entire aspect of the study. It may be understand as a science of studying how research is dines scientifically. It help to analyze, examine and interpret various aspects of research works such as sales, cost and other aspects of CVP analysis, related to effective tools of profit planning. The objective of this study will be to analyze the CVP analysis of KP and GC and thereby forward some measures to improve the situation. The major contents of research methodology followed in course of this study are;

## 3.2 Research Design

Research design means defining procedures and techniques which guide to study and propound ways for research work. It is an analytical as well as descriptive approach to achieve the objectives. It is the arrangement of condition for collection and analysis of data relevance to the study purpose with economy in procedure. In order to make type of research, this fulfills the objectives of the study.

The research design is an organized approach and not a collection of loose unrelated parts. It is an integrated system that guides the researcher in formatting, implementing and controlling the study. Useful research design can product the answers to the proposed research questions. The research design is thus an integrated frame that guides the researcher in planning and executing the research works.

Data and information are the lifeblood or major portion of any study. This study would be attempted to show the relationship among cost, volume, profit and various functional budgets for solving the problems that has accrued in Kantipur Publication and Gorkhapatra Corporation. Cost- volume and profit analysis of Kantipur Publication and Gorkhapatra Corporation. are presented and analyzed by descriptive research design and analytical method. A study design is the arrangement of the conditions for collection and analyze of data in manner that aims to combine relevance to the study purpose with the economy in producer. These studies will an intensive based on analysis of the past financial performance. To fulfill the objective of the study primary as well as secondary data will be used and study design will be descriptive as well as analytical.

## 3.3 Research Population and Sample

The large group about which the generalization is made is called the population under study, or the universe and small portion on which the study is made is called the sample of the study.

The researcher presents the current scenario of Journal presents in chapter two about daily, half weekly, weekly & half monthly in Nepal. The Kantipur Publication and Gorkhapatra Corporatrion for the study because they have some similar as well as differential feature are found to these studies. The history of Gorkhapatra is very long and it had no competitor for present's daily news till $50^{th}$ decade (till 2050 BS). Kantipur Publication established in 2047 B.S. and presents with new technology and new innovation in the field of media, gradually became the nationwide as well as global to current situation. The size and manpower of both houses are nearly equal comparative to others and the main differential feature the house is The Kantipur Publication is operated from private sector and The Gorkhapatra Corporation from government. The researcher select the those house consider the most popular and "KA" level.

All Publications of Nepal about (50/more)are taken as population. One Kantipur Publication and Gorkhapatra Corporation will be taken for the research purpose. Among them two publications i.e, Kantipur and Gorkhapatra are taken as sample because these two publication are considered as the most popular and categorize in "ka" level.

## 3.4 Source and Type of Data

Data and information are the foundation of any study. Data may be obtained from several sources; it is not easy to list them in detail. Each research project has its own data needs and data sources. Secondary data have been taken mainly from annual reports, auditor's reports, balance sheet, P/L account, cost detail sheet, previous thesis and other relevant published and unpublished documents related to Kantipur publication and Gorkhapatra Corporation. For further information informal interviews were conducted with the concern authority.

## 3.5 Variables of Studies

Variables are characteristics of person, things, groups, objects etc. A variable is thus a symbol to which numerals or values are assigned. In other words, a variable can take on many values. The researcher had used two types of variables, independent variables and dependent variables, which are presented as below:

**a.) Independent Variables**

A variable is called independent variable if it is not influenced by any other variable under study. The independent variables are those, which are the basis of prediction like sales in units, Cost of goods sold.

**b.) Dependent Variable**

A variable is called dependent variable if its values depend upon the other variables. The investigators purpose is to study analyze and predict the variability in the dependent variable. The dependent variable is the variable that is being predicted like sales in (Rs.), cost (Variable and fixed cost), profit etc.

There are three factors (i.e. cost, volume and profit) of C-V-P analysis, which are interconnected and dependent on one another. So these factors are depending variables. But, testing relationship between these variable following criteria is assumed:

| S.N | Independent Variable | S.N | Dependent Variable |
|---|---|---|---|
| 1 | Sales Unit | 1<br>2<br>3 | Sales Rs.<br>Cost (Variable & Fixed)<br>Profit |

**Figure 3-1 Classification of Variables**

## 3.6 Method of Analysis & Presentation

Analysis and presentation of the data is the core of each and every research work. In order to get the concrete results from this research, data are analyzed by using different types of tools. Basically, following two techniques are used to explain the collected data.

### 3.6.1 Descriptive Techniques

Descriptive technique is a fact-findings operation searching for adequate information. It is a type of study, which is generally conducted to assess the opinions, behaviors or characteristics of a given population and to describe the situation and events occurring at present. Descriptive technique is a process of accumulating facts. It does not necessary seek to explain relationships, test hypothesis, make predictions, or get at meanings and implications of a study.

### 3.6.2 Quantitative Techniques

Descriptive techniques would not be enough to prepare excellent research report. To fulfill the gap, or make the research report attractive and for better understanding the following profit planning and statistical tools were used:

#### 3.6.2.1 CVP Analysis Tools

C-V-P Analysis was included the following techniques:

$$\text{Contribution Margin (CM)} = \text{Sales} - \text{Variable Cost}$$

$$\text{Contribution Margin Ratio} = \frac{\text{1-Variable cost}}{\text{Sales}}$$

$$\text{Break Even Point in Units} = \frac{\text{Fixed Cost}}{\text{1- Variable cost per unit}}$$

$$\text{Break Even Point in Rupees} = \frac{\text{Total Fixed Cost}}{\text{Contribution Margin Ratio}}$$

$$\text{Break Even Point in Rupees} = \frac{\text{Total Fixed Cost}}{\text{Contribution Margin Ratio}}$$

$$\text{Cash in BEP in Rs} = \text{1-} \frac{\text{Fixed Cost –Non Cash Outlay}}{\frac{\text{Variable cost}}{\text{Sales – Non Cash Outlay}}}$$

$$\text{Required sales for desired profit (in units)} = \frac{\text{Fixed Cost + Desired Profit}}{\text{Contribution Margin Per Unit}}$$

$$\text{Required sales for desired profit (in Rs)} = \frac{\text{Fixed Cost + Desired Profit}}{\text{Contribution Margin Ratio}}$$

$$\text{Required sales in units for desired profit after tax} = \frac{\text{Fixed Cost} + \frac{\text{Desired Profit After Tax}}{\text{1-Tax}}}{\text{Contribution Margin Per Unit}}$$

$$\text{Required sales in rupees for desired profit after tax} = \frac{\text{Fixed Cost} + \frac{\text{Desired Profit After Tax}}{\text{1-Tax}}}{\text{Contribution Margin Ratio}}$$

Safety margin (in Units) = Actual sales units – BEP in unit

Safety margin (in Rs) = Actual sales Rs. – BEP in Rs

$$\text{Margin of Safety Ratio} = \frac{\text{Actual/ Budget Sales – Breakeven Sales}}{\text{Actual/ Budget Sales}}$$

### 3.6.2.2 Statistical Tools

The relationship between two or more variables can be measured by using statistical tools. In this study the following statistical tools are used.

**Bar Diagram:**

Bar diagram are one of the easiest and the most commonly used methods of presenting the numerical data. They present the data by means of bars, or rectangles of equal width. The length of the bars represents the given figures and the width may be of any size.

**Mean:**

The sum of all the observations divided by the number of observations is called Mean. In such cases all the items are equally important. It is usually devoted by X. It is defined by the following formula:

$$\text{Mean}(X) = \frac{\sum X}{N}$$

Where,

$\sum X$ = the sum of observations

N = no. of observation

**Standard Deviation (S.D.):**

The standard deviation is defined as the positive root of the mean of the squared deviations from their mean of a set of values. It is also known as Root Mean Square Deviation. It is usually devoted by the Greek letter δ (Small Sigma)

The SD is calculated by the following formula:

$$SD = \sqrt{\frac{\sum (X - \bar{X})^2}{N - 1}}$$

**Coefficient of Variation (CV):**

The relative measure of dispersion based on SD is called coefficient of SD. Thus,

$$\text{Coefficient of SD} = \frac{\delta}{\bar{X}}$$

100 times coefficient of SD is called coefficient of variation. It is denoted by C.V. thus,

$$CV = \frac{\delta}{\bar{X}} \times 100$$

**Correlation Analysis:**

The degree of relationship between two variables at a time is called correlation. In other words, two variables are correlated in such way that if one variable changes then other variables also changes subsequently.

It can be calculated by using following formula:

$$\text{Co-efficient of correlation (r)} = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2 \sum (Y - \bar{Y})^2}}$$

The correlation coefficient measures the degree of correlation between Y on X. It should be between +1 and -1. If not there is no correlation between two variables.

# CHAPTER -IV

# PRESENTATION AND DATA ANALYSIS

## 4.1 Introduction

Data presentation and analysis is the important part of the research work. It is known as heart of research. Major finding of the research depends on the data presentation and analysis. Here, the researcher has tried to present and interpret the collected data in a systematic manner and meaningful ways.

Mainly, to fulfill the objectives of the study required factors about CVP analysis are presented and analyzed. CVP analysis is important and very popular tool to measure the financial statement of the organization. It is also important tool used for profit planning in any organization. It shows which volume or level of activities is necessary to break even point or to gain a certain amount of profit. It helps to determine the volume of operation designed to maintain the corporation's profit. It shows the relationship among the variables. Cost Volume Profit analysis of these enterprises (Kantipur publication and Gorkhapatra Corporation) is comparatively presented. For that purpose sales revenue, profit, contribution margin and sensitivity test are done. Because these are the major variables of cost volume profit analysis.

The main objectives of this study are to examine the existing position of Cost Volume Profit analysis of Kantipur Publication and Gorkhapatra Corporation. On the basis of the analysis and diagnosis of the collected data and to provide the suggestion and recommendation for the improvement of CVP analysis of these publications. In this chapter collected data from the publishing houses are analyzed according to deterministic as well as probabilistic model or techniques as per the requirements of this study so as to know the real situation of CVP analysis of publishing houses. The study covers the period of five years from 2062/63 to 2066/67.

## 4.2 Sales Plan of The Kantipur Publication and Gorkhapatra Corporation

Sales are the major sources of revenue and profit. The sales plan should be as realistic as possible. If the sales plans are unrealistic then all other elements of profit plans will be out of reality.

Kantipur publication and Gorkhapatra Corporation only fix the sales target for the coming year. Kantipur publication and Gorkhapatra Corporation have no practice of prepar-

ing the long term sales plan. Only sales target for the upcoming year to each sector is fixed. There is no exercise of preparing sales plan by lines and services. Kantipur publication and Gorkhapatra Corporation have not the problems of selling its services but problems of providing services in the demanding time.

### 4.2.1 Sales Value Analysis of the Kantipur Publication

Sales value means the total monetary value of unit sold of publication (i. e. Kantipur daily, The Kathmandu post, Sarbottam Nari, Nepal Saptahik, Saptatahik) with in the period of last five years or an annual basis of Kantipur publication Pvt. Ltd.

**Table 4-1: Annual sales of Gorkhapatra Corporation and Kantipur Publication**

| Annual sales of Gorkhapatra Corporation and Kantipur Publication | | | | |
|---|---|---|---|---|
| Periods | Gorkhapatra Corporation | | Kantipur Publications | |
| | Sales (Rupees) | % change | Sales (Rupees) | % change |
| 2062/63 | 148,643,817.80 | - | 405,792,133.00 | - |
| 2063/64 | 144,013,527.20 | -3.12 | 420,139,888.00 | 3.5 |
| 2064/65 | 139,759,816.10 | -2.95 | 457,566,854.00 | 8.9 |
| 2065/66 | 143,003,267.47 | 2.32 | 556,911,420.00 | 21.71 |
| 2066/67 | 166,043,473.99 | 16.11 | 575,913,420.00 | 3.41 |

**(Annual report published by: GP & KP from 2062-2067)**

Above table No: 4.1 show the annual sales revenue of Gorkhapatra Corporation and Kantipur Publications for 5 years from F.Y 2062/63 to FY 2066/67.

Sales revenue of Gorkhapatra Corporation in the year F/Y 062/63 is Rs 14,86,43,817.80 and Rs 14,40,13,527.20 in F/Y 063/64 this shows decreased on sale by 3.12 % of Gorkhapatra Corporation than last year. Similarly the annual revenue of Kantipur Publication is Rs 40,57,92,133.00 in the F.Y. 2062/63 and Rs 42,01,39,888.00 in the F/Y 063/64 shows increased on sale by 3.5 % of Kantipur Publication in FY 063/64 than the F/Y 062/63.

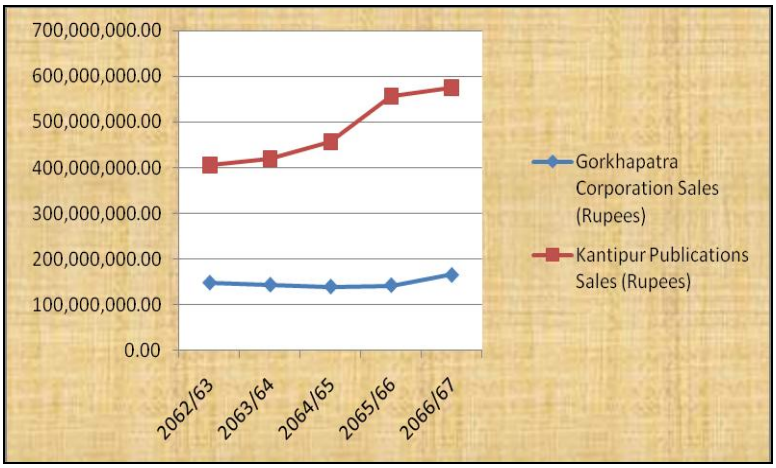
In the F.Y 2064/65 the annual sales revenue of Gorkhapatra Corpoatrion is Rs 13,97,59,816.10 and Rs 45,75,66,854.00 by Kantipur Publications respectively which is 2.95 % decrease by Gorkhpatra Corporation and 8.9% increased by Kantipur Publica-

tion than that of previous fiscal year.

The annual sales of Gorkhapatra Corporation and Kantipur Publication in F/Y 065/66 is Rs 14,30,0,3267.46 and Rs 55,69,11,420.00 respectively. The percentage change of sales both the organization is increased by sales in 2.32 % and 21.71% respectively than the fiscal year 064/65.

Similary, annual revenue of Gorkhapatra Corporation and The Kantipur Publication in the FY 066/67 is Rs 16,60,43,473.99 and 57,59,13,420.00 respectively which is 16.22% increase in the revenue of Gorkhapatra Corporation and 3.41% increase in revenue of The Kantipur Publication than that of fiscal year 065/66.

From this above calculation it can be concluded that the revenue of Gorkhapatra Corporation is highly fluctuated in last 5 years. During this five years period the annual sales revenue of Gorkhapatra Corporation in F/Y year 063/64 and 064/65 its growth is negative trend. It gives high risk to the company. So stabilization of income is necessary.




**Annual sales of Kantipur Publication and Gorkhapatra Corporation shown in Line Chart**

**Figure 4-1: Graphical presentation of the total operating income figure will be more effective by following**

**Table 4-2: Computation of various ratios of Kantipur Publication (In Rs)**

| S.N. | Particulars | 2062/63 | 2063/64 | 2064/65 | 2065/66 | 2066/67 |
|---|---|---|---|---|---|---|
| 1 | Sales | 405,792,133.00 | 420,139,888.00 | 457,566,854.00 | 556,911,420.00 | 575,913,420.00 |
| 2 | Contribution Margin | 81,158,427.00 | 79,826,579.00 | 82,362,034.00 | 122,520,512.00 | 115,182,684.00 |
| 3 | Contribution Ratio | 0.20 | 0.19 | 0.18 | 0.22 | 0.20 |
| 4 | Fixed cost | 66,621,447.00 | 66,708,106.00 | 67,345,500.00 | 64,079,581.00 | 64,214,275.00 |
| 5 | Break Even Point | 333,107,235.00 | 351,095,294.00 | 374,141,666.00 | 291,270,822.00 | 321,071,375.00 |
| 6 | Break Even % on sales | 82.09 | 83.57 | 81.77 | 52.30 | 55.75 |
| 7 | Margin of Safety | 72,684,898.00 | 69,044,593.00 | 83,425,187.00 | 265,640,597.00 | 254,842,045.00 |
| 8 | Margin of Safety on sales | 17.91 | 16.44 | 18.23 | 47.70 | 44.25 |

**Break Even Point (Rs) considering other income and expenses**

| | | | | | | |
|---|---|---|---|---|---|---|
| 9 | Other income | 3,690,084.00 | 9,571,399.00 | 3,430,688.00 | 9,950,732.00 | 9,963,103.00 |
| 10 | Fixed Cost | 6,293,136.00 | 57,136,707.00 | 63,914,812.00 | 54,128,849.00 | 54,251,172.00 |
| 11 | Break Even Point (Rs) | 314,656,815.00 | 3007,195,105.00 | 355,082,288.00 | 246,040,222.00 | 27,125,580.00 |
| 12 | MOS | 91,135,318.00 | 11,942,035.00 | 102,484,561.00 | 310,871.00 | 30,465,750.00 |
| 13 | MOS on sale (%) | 22.46 | 28.42 | 22.40 | 55.82 | 52.90 |

**(Budget reports of Kantipur Publication from 2062-2067)**

**Table 4-3: Computation of various ratios of Gorkhapatra Corporation (In Rs)**

| S.N. | Particulars | 2062/63 | 2063/64 | 2064/65 | 2065/66 | 2066/67 |
|---|---|---|---|---|---|---|
| 1 | Sales Units | 22,149,936.00 | 21,747,103.00 | 2,217,565.00 | 21,898,998.00 | 22,183,848.00 |
| 2 | Sales revenue | 148,643,817.00 | 144,013,522.00 | 139,759,816.00 | 143,003,267.00 | 166,043,473.00 |
| 3 | CM | 10,328,210.00 | 964,223,213.00 | 92,172,282.00 | 98,378,414.00 | 113,955,213.00 |
| 4 | P/V ratio | 0.69 | 0.67 | 0.66 | 0.69 | 0.69 |
| 5 | Fixed cost | 10,213,574.00 | 944,050,541.00 | 9,507,218.40 | 106,273,606.00 | 105,482,760.00 |
| 6 | BEP | 148,022,862.00 | 140,903,066.00 | 144,048,679.00 | 154,019,719.00 | 152,873,566.00 |
| 7 | BEP on sales (%) | 99.58 | 97.84 | 103.68 | 107.70 | 92.07 |
| 8 | MOS | 620,955.00 | 3,110,460.00 | (4,288,863.00) | (11,016,451.00) | 13,169,907.00 |
| 9 | MOS on sales (%) | 0.41 | 2.16 | (3.07) | (7.70) | 7.93 |
| **BEP(Rs) considering other income and expenses** | | | | | | |
| 10 | Other income | 3,226,158.00 | 4,195,037.00 | 9,228,799.00 | 5,294,873.00 | 3,156,682.00 |
| 11 | FC | 98,909,616.90 | 90,210,017.61 | 85,843,329.00 | 100,978,733.00 | 10,232,608.00 |
| 12 | BEP(Rs) 10/PV ratio | 143,347,270.00 | 134,641,817.30 | 130,065,650.00 | 1,463,459.00 | 14,829,864.00 |
| 13 | MOS | 5,296,546.90 | 9,371,709.87 | 9,694,165.40 | 128,368,668.00 | 1,774,480.009 |
| 14 | MOS % on sales | 3.56 | 6.51 | 6.94 | 89.77 | 10.69 |

**(Budget reports of Gorkhapatra Corporation from 2062-2067**

Above table shows the contribution margin, C/M or PV ratio, break even sales, margin of safety and its percentage as well as BEP. And margin of safety is calculated again considering other income of Kantipur Publication and Gorkhapatra Corporation.

### 4.2.2 Contribution Margin

Above table No: 4.2 and 4.3 show that the calculations of contribution margin of Kantipur Publications Pvt. Ltd and Gorkhapatra Corporation from fiscal years 2062/63 to 2066/67. Contribution margin for the five years show fluctuating trend. Contribution margin for the fiscal year from 062/63 to 066/67 are Rs 81,158,427.00, Rs 79,826,579.00 Rs 82,362,034.00 Rs 122,520,512.00 and Rs 115,182,684.00 respectively. Contribution margin ratio of Kantipur Publication is 0.20, 0.19, 0.18, 0.22, and 0.20 in fiscal years 2062/63 to 2066/67 respectively.

In other hand Contribution margin of Gorkhapatra Corporation is as follows from the five fiscal year 062/63 to 066/067 are Rs 10,328,210.00 Rs 96,422,322.00 Rs 92,172,282.00 Rs 98,378,414.00 and Rs 113,955,213.00 and contribution margin ratio of Gorkhapatra Corporation in F/Y 2062/63 to 2066/67 are 0.69, 0.67, 0.66, 0.69 and 0.6 respectively

High contribution margin is the signal of high profit. Above table clearly shows that the condition of Gorkhapatra Corporation is better than Kantipur Publication from contribution margin approach.

### 4.2.3 Break Even Point

Above table No: 4.2 & 4.13 show that the calculations of Break Even Point of Kantipur Publications Pvt. Ltd and Gorkhapatra Corporation for the five fiscal years 2062/63 to 2066/67 **.**

The breakeven point of Kantipur Publication is Rs 33,3107,235.00 Rs 351,095,295.00 Rs 374,141,667,00 Rs 291,270,822.00 and Rs 321,071,375.00 respectively for the years 2062/63 to 2066/67. Break Even Point amount for the FY 2065/66 is low but Break Even Point amount for the fiscal year 2064/65 is high comparatively within the five year Break Even Point amount. Percentage of BEP on sales is 82.09%, 83.57%, 81.77%, 52.30%, and 55.75% from year 2062/63 to 2066/67 respectively. The above table shows that the percentage of BEP on sales is fluctuating from 52.30% to 83.57%. The fluctuating percentage of BEP on sales indicates the fluctuating trend of profit.

In other hand, above table No: 4.3 show that the calculations of Break Even Point of Gorkhapatra Corporation for the five fiscal years 2062/63 to 2066/67**.**

The breakeven point of Gorkhapatra Corporation is Rs 148,022,862.00 Rs 140,903,067.00 Rs 144,048,679, Rs 154,019,719.00 and Rs 152,873,566.00 for the years 2062/63 to 2066/67. Break Even Point amount for the FY 2063/64 is low but Break Even Point amount for the fiscal year 2065/66 is high comparatively within the five year Break Even Point amount. Percentage of BEP on sales is 99.58%, 97.84%, 103.68%, 107.70%, and 92.07% from year 2062/63 to 2066/67 respectively

Break even sales is higher than actual sales of Gorkhapatra Corporation in FY 2064/65 & 63/64 which shows that it is necessary to increase in sales to recover loss and management should plan for its cost control. Contribution margin of Kantipur Publication is very low. It increases BEP.

### 4.2.4 Margin of safety

Kantipur Publication has Rs 72,684,898.00 safety margin in 2062/63 which is 17.91% of actual sales. The margin of safety is 16.44 %, 18.23%, 47.70% and 44.25% in remaining four years. Margin of safety is Rs 265,640,597.00 in year 2065/66. In FY 2062/63 Gorkhapatra Corporation's break even sales is lower than actual sales revenue, so safety margin is positive. In FY 2064/65 percentage of BEP on sales is 103.68% and margin of safety as percentage of sales is (3.07) % which shows the poor financial condition of Gorkhapatra Corporation. Again in FY 2065/66 and 2066/67 BEP on sales are 107.70% and 92.07% and margin of safety as percentage of sales are 7.70% (negative) and 7.93% respectively. Break even sales is higher than actual sales of Gorkhapatra Corporation in FY 2064/65 & 63/64 which shows that it is necessary to increase in sales to recover loss and management should plan for its cost control. Contribution margin of Kantipur Publication is very low and again fixed cost is low, it decreases BEP and the margin of safety becomes positive. Other income, which is non operating incomes of Kantipur Publication and Gorkhapatra Corporation, is included in fixed cost and computed BEP and margin of safety. It has reduced the BEP volume and increased the safety margin and its percentage. It clearly indicates the greater amount of indirect incomes than indirect expenses, reduce the BEP level and increase margin of safety. The graphical presentation of BEP, CM and MOS are shown in appendix

## 4.3 Cost of The Kantipur Publication and Gorkhapatra Corporation

Costs of The Kantipur Publication and Gorkhapatra Corporation are generally categorized into three groups:

1. Cost of sales
2. Administrative cost
3. Distribution cost

Cost of sales is a part of production cost which are related with raw material, lab chemicals, production salary, wages, electricity cost, water cost , launch cost , provident fund and subsidies factors land and building repairs and rent , repairs of machinery , miscellaneous cost etc.

Administrative costs are a part of management costs .It is not directly traceable to specific products and jobs .It is related with administrative salary and wages , employee bonus , operating allowance and incentives , fuel and moving costs , launch costs , provident fund , employees subsidies , donation ,depreciation ,interest , technical and computer fees and other administrative related costs.

Distribution costs affect the potential profit of companies. It is a significant portion of total costs. Distribution expenditure includes all costs related to selling, distribution and delivery of products to final customers. Distribution costs are not allocated to special products.

## 4.4 Variable Cost of Gorkhapatra Corporation and Kantipur Publication

Based on the nature of the cost and assumption, various types of cost of both enterprises are segregated into fixed and variable costs of Gorkhapatra Corporation and Kantipur Publications are as follows

**Table 4-4: Variable Cost of Kantipur Publication in different years**

| **Particulars** | **2062/63** | **2063/64** | **2064/65** | **2065/66** | **2066/67** |
|---|---|---|---|---|---|
| Sales units | 94,370,263.00 | 100,033,307.00 | 103,992,467.00 | 129,514,284.00 | 133,933,354.00 |
| Raw material | 178,338,849.00 | 192,407,708.00 | 222,583,788.00 | 290,031,936.00 | 318,615,994.00 |
| Printing materials | 65,593,770.00 | 65,900,145.00 | 67,376,805.00 | 63,714,826.00 | 70,382,633.00 |
| Lab chemical | 1,603,298.00 | 1,748,216.00 | 1,727,610.00 | 1,661,498.00 | 1,706,455.00 |
| salary & wages | 24,726,429.00 | 25,669,423.00 | 25,645,965.00 | 24,579,266.00 | 25,175,523.00 |
| Fuel & oil | 1,178,896.00 | 1,089,468.00 | 1,151,740.00 | 1,083,585.00 | 1,048,251.00 |
| Electricity cost | 18,437,933.00 | 20,041,144.00 | 19,704,774.00 | 18,998,865.00 | 19,063,546.00 |
| Water cost | 188,623.00 | 177,355.00 | 200,303.00 | 168,558.00 | 170,646.00 |
| Launch cost | 4,762,740.00 | 4,991,284.00 | 4,982,528.00 | 4,767,776.00 | 5,290,012.00 |
| Miscellaneous | 299,280.00 | 617,321.00 | 314,486.00 | 302,521.00 | 308,768.00 |
| Employee bonus | 701,505.00 | 517,336.00 | 596,948.00 | 539,262.00 | 591,230.00 |
| Operating allowance | 1,392,554.00 | 1,353,516.00 | 135,074.00 | 1,310,512.00 | 1,403,463.00 |
| Fuel & moving cost | 3,417,223.00 | 3,318,675.00 | 3,311,834.00 | 3,212,812.00 | 3,442,545.00 |
| Distribution costs | 23,992,606.00 | 22,481,718.00 | 27,472,965.00 | 24,019,491.00 | 13,531,670.00 |
| Total | 324,633,706.00 | 340,313,309.00 | 375,204,820.00 | 434,390,908.00 | 460,730,736.00 |
| Increase/decrease | - | 4.82% | 10.25% | 15.77% | 6.06% |

**(Budget report of KP 2062-2067)**

**Table 4-5: Variable cost of Gorkhapatra Corporation in different years**

| Particulars | 2062/63 | 2063/64 | 2064/65 | 2065/66 | 2066/67 |
|---|---|---|---|---|---|
| Sales units | 22,149,936.00 | 21,747,103.00 | 22,175,685.00 | 21,898,998.00 | 22,183,848.00 |
| Raw materials | 34,195,927.00 | 37,581,375.00 | 30,677,117.00 | 31,273,114.00 | 40,368,226.00 |
| Overtime | 2,540,445.00 | 2,189,827.00 | 2,516,438.00 | 2,844,585.00 | 1,883,985.00 |
| Other allowance | 2,680,878.00 | 1,687,407.00 | 1,582,466.00 | 2,033,137.00 | 1,431,563.00 |
| Telephone, telex and fax | 1,091,096.00 | 1,084,215.00 | 1,120,549.00 | 1,239,218.00 | 1,443,819.00 |
| Electricity & water | 1,526,844.00 | 1,808,715.00 | 2,392,383.00 | 2,643,617.00 | 2,158,214.00 |
| Wages | 118,004.00 | 70,856.00 | 103,086.00 | 73,921.00 | 140,018.00 |
| General exp | 40,374.00 | 22,572.00 | 11,183.00 | 66,952.00 | 32,484.00 |
| Petrol and other fuel | 1,150,111.00 | 1,369,651.00 | 1,576,360.00 | 1,527,613.00 | 1,829,251.00 |
| Promotional exp | 66,180.00 | 81,563.50 | 284,331.40 | 114,461.00 | 140,654.60 |
| Commission | 101,948.80 | 86,013.00 | 131,832.50 | 286,703.80 | 447,804.50 |
| Miscellaneous | 1,849,838.00 | 1,609,014.00 | 7,191,787.00 | 2,521,530.00 | 2,212,241.00 |
| Grand total | 45,361,647.00 | 47,591,207.00 | 47,587,534.00 | 44,624,853.00 | 52,088,261.00 |
| % increase/decrease | - | 4.92% | -0.01% | -6.23% | 16.72% |

**(Budget report of GC 2062-2067)**

In Kantipur Publication, variable cost is increased by 4.82 % in the Fiscal year 2063/64 and than previous year. Similarly, 10.25% in FY 064/065, 15.77% in FY 065/066 and 6.06% in FTY 066/67 respectively. It is clear that the variable cost of Kantipur Publication is increased continuously. But the percentage changed in variable cost is increased in normal trend.

In Gorkhapatra Corporation, total variable cost in the year 2062/063 is Rs 45,361,647.00 It reached to Rs 47,591,207.00 which is 4.92% increased than previous year. Similarly, decreased by 0.01% in FY 2064/65, 6.23 % in FY 065/066 and increased by 16.72% in FY 066/67. It affects due to increase in raw material, telephone, telex & fax and by fuel expenses in FY 066/067. From above we can say that variable cost in Gorkhapatra Corporation is fluctuation trend year by year.

## 4.5 Fixed Cost of Gorkhapatra Corporation and Kantipur Publication

Fixed costs remain constant in total despite the charges in the level of activity within every year. When production cost or service cost are charged but fixed cost remains same. The per unit fixed cost may decrease while the numbers of production units are increased. Though, fixed cost in total may vary for different fiscal year effected by internal and external environment factors of the companies. The fixed costs of Gorkhapatra Corporation and Kantipur Publication presented here are based on the assumption and nature of cost. . Fixed cost of Gorkhapatra Corporation and Kantipur Publication is presented in table below.

**Table 4-6: Fixed Cost of Kantipur Publicatin**

| **Particulars** | **2062/63** | **2063/64** | **2064/65** | **2065/66** | **2066/67** |
|---|---|---|---|---|---|
| **1.Cost of sales** | | | | | |
| Production salary & wages | 8,903,933.00 | 9,396,464.00 | 9,368,441.00 | 8,970,096.00 | 9,246,856.00 |
| Land & building | 2,175,367.00 | 2,492,682.00 | 2,385,762.00 | 2,340,486.00 | 2,465,828.00 |
| Provident fund & subsidies | 101,994.00 | 113,591.00 | 111,113.00 | 107,417.00 | 107,880.00 |
| Repairs | 3,425,175.00 | 3,141,095.00 | 3,369,909.00 | 3,113,587.00 | 3,082,285.00 |
| Miscellaneous | 616,531.00 | 1,587,333.00 | 638,108.00 | 606,683.00 | 508,577.00 |
| **Total** | **1,522,300.00** | **15,776,467.00** | **1,587,333.00** | **15,129,189.00** | **15,411,426.00** |
| **2.Administrative costs** | | | | | |
| Salary & wages | 9,232,220.00 | 8,755,917.00 | 8,849,603.00 | 8,525,395.00 | 8,630,399.00 |
| Launch cost | 1,336,143.00 | 1,341,998.00 | 1,319,395.00 | 1,286,925.00 | 1,387,028.00 |
| Provident fund &others | 1,870,600.00 | 1,374,930.00 | 1,588,906.00 | 1,433,781.00 | 967,067.00 |
| Employees quarter | 407,010.00 | 300,509.00 | 345,939.00 | 313,036.00 | 308,229.00 |
| Office repairs& mainte- | 18,500.00 | 209,944.00 | 193,082.00 | 193,232.00 | 173,379.00 |
| Printing & stationary | 312,452.00 | 337,558.00 | 321,804.00 | 316,900.00 | 308,229.00 |
| Telephone wire & postage | 1,327,921.00 | 1,424,329.00 | 1,359,621.00 | 1,348,759.00 | 1,344,647.00 |
| Particulars | 2062/63 | 2063/64 | 2064/65 | 2065/66 | 2066/67 |
| Advertisement on TV & | 456,344.00 | 370,490.00 | 406,277.00 | 374,870.00 | 385,286.00 |
| License & insurance fees | 1,253,919.00 | 1,090,888.00 | 1,154,471.00 | 1,085,964.00 | 1,078,800.00 |
| Hospitality & pray cost | 1,500,591.00 | 1,576,641.00 | 1,520,523.00 | 1,499,480.00 | 1,464,085.00 |
| **Particulars** | **2062/63** | **2063/64** | **2064/65** | **2065/66** | **2066/67** |

| | | | | | |
|---|---|---|---|---|---|
| Vehicle repairs cost | 447,146.00 | 1,202,035.00 | 1,303,305.00 | 1,213,497.00 | 1,213,650.00 |
| Advisor & auditing cost | 612,570.00 | 609,250.00 | 603,382.00 | 587,425.00 | 577,928.00 |
| Bank commission & inter- | 176,782.00 | 230,527.00 | 201,127.00 | 208,691.00 | 192,643.00 |
| Training & dress cost | 374,120.00 | 325,208.00 | 345,939.00 | 324,630.00 | 327,492.00 |
| Technical & computer fees | 3,465,750.00 | 3,429,092.00 | 3,399,052.00 | 3,308,131.00 | 3,274,928.00 |
| Security cost | 1,739,042.00 | 1,658,973.00 | 1,673,379.00 | 1,615,419.00 | 1,618,200.00 |
| Donation& membership | 328,897.00 | 308,742.00 | 313,759.00 | 301,442.00 | 300,523.00 |
| Depreciation | 5,961,254.00 | 6,240,700.00 | 8,592,954.00 | 8,183,423.00 | 6,164,570.00 |
| Interest | 9,044,661.00 | 10,287,276.00 | 8,646,475.00 | 8,428,779.00 | 8,722,867.00 |
| Miscellaneous | 98,668.00 | 90,565.00 | 84,474.00 | 96,616.00 | 88,614.00 |
| Total | 41,112,059.00 | 41,165,572.00 | 40,225,467.00 | 38,644,635.00 | 38,528,565.00 |
| 3.Distribution cost | 10,286,352.00 | 9,766,067.00 | 11,246,700.00 | 10,303,997.00 | 10,274,284.00 |
| Total fixed cost(1+2+3) | 66,621,447.00 | 66,708,106.00 | 67,345,500.00 | 64,079,581.00 | 64,214,275.00 |
| % change | - | 0.13% | 0.96% | -4.86% | 0.21% |

**(Annual budget report published by: KP from 2062-2067)**

From above table we can say that, total fixed cost of Kantipur Publication in FY 062/063 is Rs 66,621,447.00. It is increased by 0.13% and reached Rs 66,708,106.00 in F.Y 2063/64. In FY 2064/65 fixed cost is increased by 0.96% comparison to previous year than FY 063/064. In F.Y 2065/66 its total fixed cost decreased by 4.86% but in F.Y 2066/67 fixed cost is increased by 0.21% than FY 065/066. The size of fixed cost of Kantipur Corporation is larger than Gorkhapata Corporation. The total fixed cost of Kantipur Publication is very high. High fixed cost increases the breakeven level. So, the management should try to reduce the unusual fixed cost by preparing strategic plans**.**

**Table 4-7: Fixed cost of Gorkhapatra Corporation**

| Year | 2062/63 | 2063/64 | 2064/65 | 2065/66 | 2066/67 |
|---|---|---|---|---|---|
| **1.Selling & adm. Cost** | | | | | |
| Salary | 18,854,258.00 | 17,642,548.90 | 18,341,235.00 | 18,338,614.31 | 1,831,864.00 |
| Dashain allowance | 1,463,722.00 | 1,417,181.00 | 1,439,498.00 | 1,466,047.00 | 1,442,821.00 |
| Contribution employee | 8,334,095.00 | 5,972,295.00 | 6,833,695.20 | 8,257,375.93 | 9,726,340.00 |
| Other allowance | 428,940.00 | 711,636.00 | 1,066,425.00 | 539,818.92 | 2,049,559.00 |
| Dress expanses | 1,276,900.00 | 1,299,850.00 | 1,232,700.00 | 1,215,300.00 | 1,188,700.00 |
| Bank commission | 131,089.00 | 47,762.94 | 51,128.11 | 84,187.22 | 78,248.76 |
| Repairs & maintenances | 559,365.00 | 583,967.00 | 495,680.00 | 512,526.62 | 877,248.10 |
| Stationary & other parts | 899,233.00 | 913,562.00 | 807,696.50 | 808,789.30 | 954,484.00 |
| Remuneration (other) | 63,000.00 | 60,000.00 | 60,000.00 | 60,000.00 | 60,000.00 |
| Employee training | 200,000.00 | 20,250.00 | 1,500.00 | 28,500.00 | 7,000.00 |
| Installation of telephone | 366,165.00 | 27,000.00 | 9,000.00 | - | 1,800.00 |
| miscellaneous | 8,602,043.00 | 7,673,871.00 | 9,966,003.00 | 3,831,301.24 | 9,905,717.00 |
| **2. Production cost** | | | | | |
| salary | 26,519,967.00 | 26,291,558.78 | 26,838,266.00 | 26,922,762.67 | 27,939,980.00 |
| Dashain allowance | 2,294,108.00 | 2,089,623.00 | 2,053,130.00 | 2,014,176.00 | 2,034,800.00 |
| Contribution employee | 15,200,024.00 | 12,095,169.00 | 10,680,066.00 | 12,578,446.83 | 1,002,731.00 |
| Other allowance | 623,935.00 | 889,569.00 | 1,057,004.00 | 544,630.22 | 2,531,321.00 |
| Dress expenses | 1,643,000.00 | 1,525,900.00 | 1,488,100.00 | 1,475,825.00 | 1,427,300.00 |
| Repairs & maintenances | 438,588.00 | 260,637.00 | 111,991.00 | 476,536.00 | 902,821.50 |

| | | | | | |
|---|---|---|---|---|---|
| Stationary & other parts | 3,944,201.00 | 4,217,831.00 | 5,852,616.00 | 7,358,501.47 | 5,064,637.00 |
| Employee training exp. | 4,058,350.00 | 4,581,682.00 | - | 4,806,705.00 | 4,447,622.00 |
| Installation of telephone | 18,000.00 | 18,000.00 | 2,000.00 | 2,000.00 | - |
| Miscellaneous | 6,216,790.00 | 6,065,160.00 | 6,684,394.00 | 14,951,562.41 | 6,496,322.00 |
| Total | 102,135,774.00 | 94,405,054.61 | 95,072,128.00 | 106,273,606.10 | 105,482,760.00 |
| % change | - | (7.57) | 7.06 | 11.07 | (7.44) |

**(Annual budget report published by: GC from 2062-2067)**

From the above table 4.7 it shows that fixed of Gorkhapatra Corporation is in fluctuating trend from FY 2062/63 to FY 2066/67. In FY 2063/64 fixed cost of Gorkhapatra Corporation being decreased by 7.57% in comparison of fixed cost of FY 2062/63. In FY 2064/65 fixed cost of Gorkhapatra Corporation is increased by 7.06% in comparison with FY 2063/64. Then increased by 11.78% in FY 065/066 again variable cost is decreased by 7.44% in FY 066/067. The increase in fixed cost in FY o65/066 is high this is due to highly increased in other allowance, repair and maintenance cost, and training & development cost etc. This shows that the nature of fixed cost is fin Gorkhapatra Corporation.

## 4.6 Sensitivity Analysis: Assessing the Impacts of Changes in Cost Volume Profit Variables

Sensitivity analysis is another popular technique of testing the Cost Volume Profit variables. It shows the impact on other factor if there is any change in distinct variable. Sensitivity analysis measures the elasticity of the change in CVP factors on breakeven point or given profit. To measure the sensitivity of CVP factors we can see the impact of certain percentage or amount changes in volume, price or cost factors on net profit. For measurement of sensitivity we have various variables but these all are not possible to test. So the main factors like sales, fixed cost

and variable cost change impact are shown below for both enterprises

## 4.7. Assessing the Impact When Sales Revenue or Operating Income Changed

Breakeven level of enterprises will change when sales per unit is changed. But breakeven level is not changed when the total amount of sales revenue is changed due to change in sales unit. Because change in sales revenue impacts on contribution margin and its ratio too. In the case of increase or decrease in the selling price its effects on contribution margin which is the cause in PV ratio, BEP and margin of safety.

**Table 4-8: Sensitivity Analysis of Kantipur Publication**

**Income Statement By 10% Change In Selling Price (FY 2066/67)**

| **Particulars** | **Original** | **10% increase in sales** | **10% decrease in sales** |
|---|---|---|---|
| Sales | 575,913,420.00 | 633,504,762.00 | 518,322,078.00 |
| Less; variable cost | 460,730,736.00 | 460,730,736.00 | 460,730,736.00 |
| Contribution margin | 115,182,684.00 | 172,774,026.00 | 57,591,342.00 |
| Less; fixed cost | 64,214,275.00 | 64,214,275.00 | 64,214,275.00 |
| Net Income | 50,968,409.00 | 108,559,751.00 | (6,622,933.00) |
| Change in Income | - | 57,591,342.00 | (575,912.00) |
| PV ratio | 0.2 | 0.27 | 0.11 |
| BEP in Rs | 321,071,375.00 | 237,830,648.10 | 583,766,136.40 |
| % change in BEP | - | -25.93 | 81.81 |

When selling price of Kantipur Publication is increased by 10%, net income is increased by Rs 57,591,342.00, profit volume ratio is increased to 0.27 from 0.2. And break even amount is decreased to 23,7830,648.1 which is 25.93% less than actual level. When the selling price is reduced by 10% the income of Gorkhapatra Corporation is decreased by Rs 57,591,342, PV ratio decreases to 0.11 from 0.2 and BEP is Rs 583,766,136.4 which is higher than actual.

On other hand when selling price of Gorkhapatra Corporation is increased by 10%, net income is increased by Rs 14,864,381.80 profit volume ratio is increased to 0.72 from

0.69, and break even amount is decreased to Rs 141,855,242.9 which is 4.17% less than actual level. When the selling price is reduced by 10% the income of Gorkhapatra Corporation is decreased by Rs 148,64,381.80, PV ratio decreases to 0.66 from 0.72 and BEP is Rs 154,751,174.10 which is higher than actual.

**Table 4-9: Sensitivity Analysis of Gorkhapatra Corporation**

| **Particulars** | **Original** | **10% increase in sales price** | **10% decrease in sales price** |
|---|---|---|---|
| Sales | 148,643,817.80 | 163,508,199.60 | 133,779,436.00 |
| Less; variable cost | 45,361,647.00 | 45,361,647.00 | 45,361,647.00 |
| Contribution margin | 103,282,170.80 | 118,146,552.60 | 88,417,789.00 |
| Less; fixed cost | 102,135,774.90 | 102,135,774.90 | 102,135,774.90 |
| Net Income | 1,146,395.90 | 16,010,777.70 | (13,717,985.90) |
| Change in Net Income | - | 14,864,381.80 | (14,864,381.80) |
| PV ratio | 0.69 | 0.72 | 0.66 |
| BEP in Rs | 148,022,862.20 | 141,855,242.90 | 154,751,174.10 |
| % change in BEP | | -4.17% | 4.54% |

**Income Statement by 10% Change In Selling Price (FY 2066/67)**

## 4.8. Assessing the impact when variable cost is changed

When the variable cost is changed without changing the sales revenue and fixed cost we can find the change result in PV ratio, profit BEP and its percentage also. When variable cost increase CM ratio will decrease as a result BEP will high and vice-versa. Change in the variable cost changes all the variables related with CVP analysis like contribution margin, PV ratio and BEP.

**Table 4-10: Sensitivity Analysis of Kantiput Publication**

**Income Statement By 10% Change Variable cost (FY 2066/67)**

| Particulars | Original | 10% increase in variable cost | 10% decrease in variable cost |
|---|---|---|---|
| Sales | 575,913,420.00 | 575,913,420.00 | 575,913,420.00 |
| Less; variable cost | 460,730,736.00 | 506,803,809.60 | 414,657,662.40 |
| Contribution margin | 115,182,684.00 | 115,182,684.00 | 69,109,610.40 |
| Less; fixed cost | 64,214,275.00 | 64,214,275.00 | 64,214,275.00 |
| Net Income | 50,968,409.00 | 4,895,335.40 | 97,041,482.60 |
| Change in Net In- | | (46,073,073.60) | 46,073,073.60 |
| PV ratio | 0.2 | 0.12 | 0.28 |
| BEP in Rs | 321,071,375.00 | 535,118,958.30 | 229,336,696.40 |
| % change in BEP | - | 67.77 | -28.57 |

**Table 4-11: Sensitivity Analysis of Gorkhapatra Corporation**

**Income Statement By 10% Change in Variable cost (FY 2066/67)**

| Particulars | Original | 10% increase in variable cost | 10% decrease in variable cost |
|---|---|---|---|
| Sales | 166,043,473.99 | 166,043,473.99 | 166,043,473.99 |
| Less; variable cost | 52,088,261.00 | 57,297,087.00 | 46,879,434.90 |
| Contribution margin | 113,955,213.00 | 108,746,386.90 | 119,164,039.10 |
| Less; fixed cost | 105,482,760.60 | 105,482,760.60 | 105,482,760.60 |
| Net Income | 8,472,452.39 | 3,263,626.29 | 13,681,278.49 |
| Change in Net Income | | (5,208,826.10) | 5,208,826.10 |
| PV ratio | 0.69 | 0.65 | 0.72 |
| BEP in Rs | 152,873,566.10 | 162,281,170.20 | 146,503,834.20 |
| % change in BEP | - | 6.15% | -4.17% |

Above table shows that when variable cost of Kantipur Publication is increased by 10%, net income of the company is decreased by Rs 46,073,073.60 PV ratio decreases to 0.12 from 0.20 and BEP increases from 321,071,375.00 to 5,535,118,958.3 by 67.77%. When the variable costs are decreased by 10%, net income of the company is increased by 4607303.6. Where PV ratio is 0.28 and break even sales becomes Rs 229336696.4 and

BEP decreases by 28.57% on actual level.

On other hand, in above table variable cost of Gorkhapatra Corporation is changed by10%. When variable cost is increased by 10%, net profit of Gorkhapatra Corporation is decreased by Rs 5208826.1.PV ratio is decreased to 0.65. Break even sales is increased to Rs 162281170.2 from Rs 15287366.1 which is 6.1% more than actual level. When variable cost of Gorkhapatra Corporation is reduced by 10%, net profit is increased by Rs 5208826.1. Where PV ratio is increased to 0.72 from 0.65. So break even sales reduced to Rs 146503834.2 which is 4.17% less than actual level.

**Table 4-12: Sensitivity Analysis of Kantipur Publication**

**Income Statement By 10% Change in Fixed cost (FY 2066/67)**

| Particulars | Original | 10% increase in fixed cost | 10% decrease in fixed cost |
|---|---|---|---|
| Sales | 575,913,420.00 | 575,913,420.00 | 575,913,420.00 |
| Less; variable cost | 460,730,736.00 | 460,730,736.00 | 460,730,736.00 |
| Contribution margin | 115,182,684.00 | 115,182,684.00 | 115,182,684.00 |
| Less; fixed cost | 64,214,275.00 | 70,635,702.50 | 57,792,847.50 |
| Net Income | 50,968,409.00 | 44,546,981.50 | 57,389,836.50 |
| Change in Income | | (6,421,427.50) | 6,421,427.50 |
| PV ratio | 0.20 | 0.20 | 0.20 |
| BEP in Rs | 321,071,375.00 | 353,178,512.50 | 288,964,237.50 |
| % change in BEP | - | 0.10 | (0.10) |

**Table 4-13: Sensitivity Analysis of Gorkhapara Corporation**

**Income Statement By 10% Change in Fixed cost (FY 2066/67)**

| Particulars | Original | 10% increase in fixed cost | 10% decrease in fixed cost |
|---|---|---|---|
| Sales | 166,043,473.99 | 166,043,473.99 | 166,043,473.99 |
| Less; variable cost | 52,088,261.00 | 52,088,261.00 | 52,088,261.00 |
| Contribution margin | 113,955,213.00 | 113,955,213.00 | 113,955,213.00 |
| Less; fixed cost | 105,482,760.60 | 116,031,036.70 | 94,934,484.54 |
| Net Income | 8,472,452.40 | (2,075,823.70) | 19,020,728.46 |
| Change in Net In- | | (10,548,276.10) | 10,548,276.06 |
| PV ratio | 0.69 | 0.69 | 0.69 |
| BEP in Rs | 152,873,566.10 | 168,160,922.80 | 137,586,209.50 |
| % change in BEP | | 0.10 | (0.10) |

Above table shows the effect of change in fixed cost of Kantipur Publication. When fixed cost is increased by 10% net profit of the publication is decreased by Rs 6421427.5, Break even sales is increased up to Rs 33178512.5 from Rs 321071375 which is 10% more than original Break even sales. But PV ratio is same because there is no any effect on contribution margin while fixed cost is changed. When the fixed cost of Kantipur Publication is reduced by 10%, net profit of the publication is increased by Rs 6421427.5. PV ratio is not changed but break even sales become Rs 2288964237.5 from Rs 32107137

On other hand, when fixed cost of Gorkhapatra Corporation is increased by 10%, net income of the company is decreased to Rs (2075823.7) from Rs 8472452.4. There is no effect on PV ratio while fixed cost is changed. So PV ratio is same, but break even revenue of the company is increased up to Rs 168160922.8 from Rs 152873566.1.The level of BEP increases due to increase in fixed cost because to recover additional amount of fixed cost, it is required to increase in sales. When the fixed cost of Gorkhapatra Corporation is reduced by 10%, net profit is increased by Rs 10548276.06. PV ratio remains constant because variables of PV ratio cannot change due to change in fixed cost. BEP reduces to Rs 137586209.5 from Rs 152873566.1 due to decrease in fixed cost.

## 4.9 Net Profit Position of The Kantipur Publication and Gorkhapatra Corporation

Profit is primary factor, which can be used to measure the success of the firm. Generally profit can be defined as differences between sales revenue and total cost. In real sense profit is the return on investment or the return of labors exercised over a business enterprises. Every organization needs profit. Without profit, organization can not run smoothly and fail to achieve its goal. Profit earning is compulsory to every company or firm. Here the profit/loss position of Gorkhapatra Corporation and Kantipur Publication is shown in table as follows:

**Table 4-14: Profit and loss of Gorkhapatra Corporation and Kantipur Publication**

| Periods | Kantipur Publication | | | Gorkhapatra Corporation | | |
|---|---|---|---|---|---|---|
| | Profit/loss | Change | % Change | Profit/loss | Change | % Change |
| 2062/63 | 18,227,064.00 | - | - | 4,372,553.90 | - | - |
| 2063/64 | 22,689,872.00 | 4,462,808.00 | 24.49 | 621,230.32 | 1,839,750.0 | 42 |
| 2064/65 | 18,447,222.00 | (4,242,650.00 | (18.70) | 6,328,952.63 | 116,648.00 | 1.88 |
| 2065/66 | 68,391,663.00 | 49,944,441.00 | 270.74 | (2,600,318.63 | (8,929,271.0 | -141 |
| 2066/67 | 60,931,512.00 | (7,460,151.00 | (10.91) | 11,629,134.40 | 14,229,453. | 547 |

Above table shows that, profit position of Kantipur Publication is increasing in fluctuating trend. IN FY 2063/64 it increases by 24.49% while in FY 2064/65 it is decreased by 18.7% and amount became Rs 18447222 from 22689872(previous year). In 2063/064 profit is increased by Rs 49944441 which is 270.74% more than previous fiscal year. Again in 2066/67 net profit of Kantipur Publication decreased in higher amount which is 10.91% less than previous FYs income

Similarly, profit position of Gorkhapatra Corporation is increasing in fluctuating trend. IN FY 2063/64 it increases by 42 % while in FY 2064/65 it is increased by percentage of 1.88% and able to earn additional amount of Rs 116648.31. In 2063/064 profit is decreased by Rs 8929271.26 which is 141% less than previous fiscal year. Again in 2066/67 net profit of Gorkhapatra Corporation increased in higher amount i.e. Rs 14229453.03 which is 547 % more than previous FYs income.

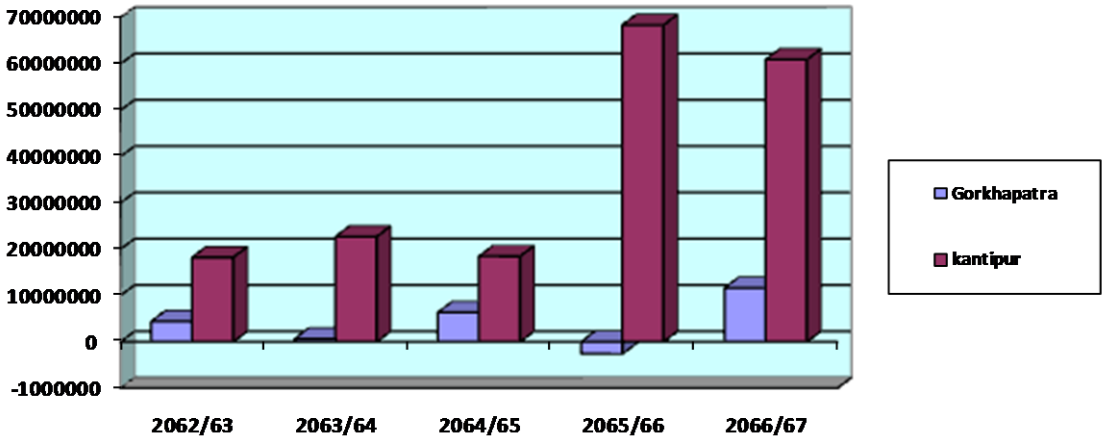



**Figure 4-2: Graphical Presentation of Profit and loss of Gorkhapatra Corporation and Kantipur Publication**

## 4.10 Major Findings

Every research work is done to find something new based on the objectives of the study. On the basis of different analysis, observation and formal as well as informal discussion the following major findings have been drawn:

1. Sales of the Kantipur Publication are increasing every year in fluctuating rate while sales of Gorkhapatra Corporation has increased in lower rate than Kantipur Publication. Kantipur Publication forecasted sales for FY 2067/68 is Rs 626368977 and forecasted sales for GC for FY 2067/68 is Rs6257129495. The sales plan of Kantipur Publication has systematic but Gorkhapatra Corporation has not systematic. So, Gorkhapatra Corporation, it is difficult to achieve their target.
2. Variable cost Kantipur Publication is higher compare to its fixed cost. Contribution margin ratio of Kantipur Publication is very less while it is satisfactory in place of Gorkhapatra Corporation.
3. Kantipur Publication is running in profit while Gorkhapatra Corporation has fluctuating profit. Kantipur Publication has earned reliable profit and has made it able to stand as one of the most successful publication of the country. In other hand, Gorkhapatra Corporation has no satisfactory position. No any systematic plans have

been implanted for preventing the loss and improve profit by Gorkhapatra Corporation

4. Fixed cost is lower than variable cost of Kantipur Publication. In Kantipur Publication variable cost is high due to high production cost. In Kantipur Publication fixed cost is high due to overstaffing of employees.
5. Kantipur Publication has low P/V ratio and low fixed cost which reduces the break even level of the company but in the case of Gorkhapatra Corporation P/V ratio is very high and it has high fixed cost which increases the BEP sales.
6. Kantipur Publication's margin of safety is in average above 35 percent which indicates the safety of the company. But Gorkhapatra Corporation's margin of safety is low around 23.6 % due to higher BEP sales.
7. Profit position of Kantipur Publication is best. On the other hand Gorkhapatra Corporation has not satisfactory earning profit despite of its Government protection. Kantipur Publication has systematic plan and controlling mechanism but Gorkhapatra Corporation has no systematic plan and controlling mechanism.
8. Overhead expenses are not classified systematically and it creates problem to analyze its expenses properly.
9. CVP analysis is very important and popular tools to measure the financial performance of enterprises both publication have not used this tools properly.

# CHAPTER- V

# SUMMARY, CONCLUSION AND RECOMMENDATIONS

## 5.1 Summary

Management effectively achieves organizational objectives through the efficient use of scarce resources in a changing environment. Future is uncertain which creates risk and to reduce risk the only reliable weapon is good management. CVP analysis is an analytical technique for studying the relationship between volume, costs and profit which helps to manage future costs and profit. Profit planning is a management technique and it is a written plan in all aspect of business operation for specific future period. CVP analysis is a device used to determine the usefulness of profit planning process of the firm. In fact, the entire field of profit planning has become associated with the CVP inter relationship.

The main objective of the present research is to examine cost-volume profit analysis as a tool to measure effectiveness of profit planning of Kantipur Publication and GC. So, this study was undertaken to evaluate CVP analysis of the companies. As per the nature of the study, the secondary data with descriptive and analytical approach for sales analysis, cost analysis, profitability analysis, contribution margin analysis, PV ratio analysis, and BEP analysis are used. And to support the study primary data are collected formally and informally from the concerned person of the companies.

The main objective of the study was to highlight the cost volume analysis of Kantipur Publication and Gorkhapatra Corporation and comparatively studied its sales revenue, profit volume ratio BEP sales, safety margin etc. As per the objectives of the study, various primary and secondary data were collected for five years from F/Y2062/63 to 2066/67. The collected data were analyzed with descriptive and analytical approach. Sales revenue analysis, sales trend analysis, cost analysis, P/V ratio analysis, BEP analysis, sensitivity analysis, profitability analysis were done with the help of various financial tools. Primary data were collected by direct interview with concerned employee and senior staff of both publications. Secondary data were drawn from various documents like annual report, journal published by these enterprises and concerned authority. From analysis of various data collected by the primary and secondary sources, the publications showed the different results. Kantipur Publication has made the reliable profit, high contribution margin and its operating income is increasing in fluctuating trend during the period. Variable cost Kantipur Publication is higher compare to its fixed cost. Contribu-

tion margin ratio of Kantipur Publication is very less while it is satisfactory in place of Gorkhapatra Corporation. Kantipur Publication is running in profit while Gorkhapatra Corporation has fluctuating profit. Kantipur Publication has earned reliable profit and has made it able to stand as one of the most successful publication of the country. In other hand, Gorkhapatra Corporation has no satisfactory position. No any systematic plans have been implanted for preventing the loss and improve profit by Gorkhapatra Corporation. Fixed cost is lower than variable cost of Kantipur Publication. In Kantipur Publication variable cost is high due to high production cost. In Gorkhapatra Corporation fixed cost is high due to overstaffing of employees. Kantipur Publication has low P/V ratio and low fixed cost which reduces the break even level of the company but in the case of Gorkhapatra Corporation P/V ratio is very high and it has high fixed cost which increases the BEP sales. Kantipur Publication's margin of safety is in average above 35 percent which indicates the safety of the company. But Gorkhapatra Corporation's margin of safety is low around 23.6 % due to higher BEP sales. Both the publication has not practiced CVP analysis techniques as a tool to measure the effectiveness of profit planning and control.

## 5.2 Conclusion

After analyzing in detail in relation to the Kantipur Publication & Gorkhapatra Corporation, I have made the conclusions stated as below:

1. Kantipur Publication has the practice of preparing two types of managerial budgeting, which are tactical and strategic. Tactical plan prepared for external purpose but strategic plan is made only for top level management or internal purpose.
2. There is scientific tool used to segregate the cost in to fixed and variable in both of these enterprises but it is not used properly. Here, costs of these publications were segregated on the basis of nature of cost and general assumptions. After segregation of costs contribution margin, P/V ratio, BEP, margin of safety are computed and analyzed. Their capacity is not effectively utilized. Gorkhapatra Corporation fails to analyze their strength and weakness in depth to gain future opportunities. Though Kantipur Publication has high contribution margin and actual sales is greater than BEP sales. So, KP has been able to earn profit.
3. Gorkhapatra Corporation has nominal profit due to high cost; variable and fixed both costs are very high. . Profit position of Kantipur Publication is best. On the

other hand Gorkhapatra Corporation has not satisfactory.

4. Kantipur Publication has systematic plan and controlling mechanism but Gorkhapatra Corporation has no systematic plan and controlling mechanism. Overhead expenses are not classified systematically and it creates problem to analyze its expenses properly.
5. Sales of the Kantipur Publication are increasing every year in fluctuating rate while sales of Gorkhapatra Corporation has increased in lower rate than Kantipur Publication. Kantipur Publication forecasted sales for FY 2067/68 is Rs 626368977 and forecasted sales for Gorkhapatra Corporation for FY 2067/68 is Rs6257129495. The sales plan of Kantipur Publication has systematic but Gorkhapatra Corporation has not systematic. So, Gorkhapatra Corporation, it is difficult to achieve their target.
6. Variable cost Kantipur Publication is higher compare to its fixed cost. Contribution margin ratio of Kantipur Publication is very less while it is satisfactory in place of Gorkhapatra Corporation.
7. Kantipur Publication is running in profit while Gorkhapatra Corporation has fluctuating profit. Kantipur Publication has earned reliable profit and has made it able to stand as one of the most successful publication of the country. In other hand, Gorkhapatra Corporation has no satisfactory position. No any systematic plans have been implanted for preventing the loss and improve profit by Gorkhapatra Corporation
8. Fixed cost is lower than variable cost of Kantipur Publication. In Kantipur Publication variable cost is high due to high production cost. In Gorkhapatra Corporation fixed cost is high due to overstaffing of employees.
9. Kantipur Publication has low P/V ratio and low fixed cost which reduces the break even level of the company but in the case of Gorkhapatra Corporation P/V ratio is very high and it has high fixed cost which increases the BEP sales.
10. Kantipur Publication's margin of safety is in average above 35 percent which indicates the safety of the company. But Gorkhapatra Corporation's margin of safety is low around 23.6 % due to higher BEP sales.
11. Profit position of Kantipur Publication is best. On the other hand Gorkhapatra Corporation has not satisfactory earning profit despite of its Government protection. Kantipur Publication has systematic plan and controlling mechanism but

Gorkhapatra Corporation has no systematic plan and controlling mechanism.

12. Overhead expenses are not classified systematically and it creates problem to analyze its expenses properly.

## 5.3 Recommendations

Most of the above conclusion points are seemed to be unfavorable; those should be made correction as soon as possible. I strongly suggest the following to Kantipur Publication & Gorkhapatra Corporation and to change unfavorable points into favorable:

1. Kantipur Publication and Gorkhapatra Corporation have many expert and skilled manpower but these enterprises have ignored the practice of CVP analysis properly. They have not classified or segregated various types of costs into fixed and variable properly. It is essential to classify the costs which help in controlling cost.
2. Generally, Kantipur Publication and Gorkhapatra Corporation have shown their overheads as administrative expenses, it should be classified in scientific way as administrative overhead, selling and distribution expenses, repairs and maintenance expenses and production overhead which makes easy to control the overhead properly.
3. Cost plan of both enterprises are not systematically maintained. So cost of every sector should plan properly. It is necessary to establish cost control program in these enterprises. It will maintain the discipline on cost control.
4. Sales revenue of both enterprises is in increasing trend but it is not sufficient to cover the cost and earn desired profit. The variable cost of Gorkhapatra Corporation is very high which is required to reduce in future to make profit. Sales plan of these enterprises should clearly maintain and improve to catch the market oppournity.
5. Kantipur Publication is running smoothly by earning profit whereas Gorkhapatra Corporation has nominal profit. Gorkhapatra Corporation should learn the lesson from the KP management and its success. Though Kantipur Publication's profit is not sufficient it should control fixed cost. Gorkhapatra Corporation is bearing very high fixed and variable cost. Interest on loan increased the fixed cost of Kantipur Publication. So, long term loan of the Kantipur Publication should reduce to earn profit in future and variable cost should be controlled.

6. Contribution margin ratio of Kantipur Publication is 20% in average whereas Gorkhapatra Corporation has about 69% CM Ratio because of less variable cost. It is suggested to Kantipur Publication that it should control variable cost and increase contribution margin.
7. An actual sale of Kantipur Publication is very high in comparison to BEP sales, greater the difference between actual sales and BEP sales represents the greater amount of profit. Actual sales of Gorkhapatra Corporation are a little bit high in comparison to BEP sales. So, Kantipur Publication is earning profit and Gorkhapatra Corporation has nominal profit. Gorkhapatra Corporation should reduce its break even sales by reducing variable and fixed costs as well as increasing sales revenue.
8. Margin of safety, Kantipur Publication, is nearly 36% of total sales after deducting the variable costs. But Gorkhapatra Corporation had safety margin nearly 23% which shows that it is necessary to increase the current sales. So, it is suggested to increase sales volume to Gorkhapatra Corporation Kantipur Publication and Gorkhapatra Corporation are the service oriented organizations, it cannot pay high amount on interest (especially Kantipur Publication). So Kantipur Publication should take soft loan with minimum rate of interest. Subsidy and accumulated loss should be set-off by the way of reduction in equity capital, which may help to eliminate the losses and make financial position strong.
9. Gorkhapatra Corporation's management performance do not show satisfactory results about profit, BEP level, CM so the management are recommended to perform their programmed and task in planned way.

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# APPENDICES

## Appendix-1: Income of Gorkhapatra Corporation in different year

| Particulars | Fiscal Years | | | | |
|---|---|---|---|---|---|
| | **2060/061** | **2061/062** | **2062/063** | **2063/064** | **2064/065** |
| | | | | | **In Units** |
| **Gorkhapatra** | 16614990 | 16394400 | 16576560 | 16451424 | 16646850 |
| **The Rising Nepal** | 4826790 | 4890510 | 4898475 | 4763070 | 4852278 |
| **Madhupark** | 100980 | 105084 | 103410 | 96444 | 100116 |
| **Yuva munch** | 350676 | 354564 | 343980 | 340740 | 333720 |
| **Muna** | 256500 | 2545 | 253260 | 247320 | 250884 |
| **Total** | **22149936** | **21747103** | **22175685** | **21898998** | **22183848** |
| | | | | | **Amount (Rs)** |
| **Gorkhapatra** | 111499896 | 108026647 | 104835876 | 107268836 | 124551631 |
| **The Rising Nepal** | 32391628 | 31382621 | 30455676 | 31162471 | 36183264 |
| **Madhupark** | 677657 | 656547 | 637155 | 651942 | 756980 |
| **Yuva munch** | 2353317 | 2280011 | 2212666 | 2264016 | 2628787 |
| **Muna** | 1721320 | 1667701 | 1618442 | 1656002 | 1922812 |
| **Total** | **148643818** | **144013527** | **139759816** | **143003267** | **166043474** |
| **Increase/Decrease** | **-** | **(3.12)%** | **(2.95)%** | **2.32%** | **16.11%** |

## Appendix-2: Time series analysis of Gorkhapatra Corporation

| **Year** | **Income y** | **Time x** | **$x^2$** | **xy** |
|---|---|---|---|---|
| **2062/63** | 148643817.8 | 1 | 1 | 148643817.8 |
| **2063/64** | 144013527.20 | 2 | 4 | 288027054.4 |
| **2064/65** | 139759816.10 | 3 | 9 | 419279448.3 |
| **2063/64** | 143003267.47 | 4 | 16 | 572013069.6 |
| **2066/67** | 166043473.99 | 5 | 25 | 830217369.5 |
| **n=5** | **$\sum y$=741463902.4** | **$\sum x$=15** | **$\sum x^2$=55** | **$\sum xy$=2258180760** |

**Appendix 3: Income statement of The Kantipur Publication for the year 2062/63 to 2066/67 (In Rs)**

| Particular | 2062/63 | 2063/64 | 2064/65 | 2063/64 | 2066/67 |
|---|---|---|---|---|---|
| Sales Units | 94370263 | 100033307 | 103992467 | 129514284 | 133933354 |
| Sales revenue | 405792133 | 420139888 | 457566854 | 556911420 | 575913420 |
| Variable cost | 324633706 | 340313309 | 375204820 | 434390908 | 460730736 |
| CM (1-2) | 81158427 | 79826579 | 82362034 | 122520512 | 115182684 |
| Total fixed cost | 66621447 | 66708106 | 67345500 | 64079581 | 64214275 |
| Profit/loss(3-4) | 14536980 | 13118473 | 15016534 | 58440931 | 50968409 |
| Other income | 3690084 | 9571399 | 3430688 | 9950732 | 9963103 |
| Profit/loss including other income | 18227064 | 22689872 | 18447222 | 68391663 | 60931512 |
| P/L % on sales | 4.49% | 5.40% | 4.03% | 12.28% | 10.58% |
| %increase/decrease | - | 20.27% | (25.37)% | 204.71% | (13.84)% |

**Appendix-4: Income statement of Gorkhapatra Corporation for the year 2062/63 to 066/67 (Rs)**

| Particular | 2062/63 | 2063/64 | 2064/65 | 2063/64 | 2066/67 |
|---|---|---|---|---|---|
| Sales Units | 22149936 | 21747103 | 22175685 | 21898998 | 22183848 |
| Operating revenue | 1486438178 | 144013527.20 | 139759816 | 143003267 | 166043473 |
| Variable cost | 45361647 | 47591205 | 47587534 | 44624853 | 52088261 |
| CM(1-2) | 103282170.8 | 96422322 | 92172282 | 98378414 | 113955213 |
| Total fixed cost | 102135774.9 | 94405054.61 | 95072128 | 106273606 | 105482760 |
| Profit /loss | 1146396 | 2017267 | (2899846) | (7895191) | 8472452 |
| Other income | 3226158 | 4195037 | 9228799 | 5294873 | 3156682 |
| Profit /loss | 4372553.9 | 6212304.32 | 6328952.63 | (2600318) | 11629134 |
| P/L% on sales | 2.94% | 4.31% | 4.53% | (1.82)% | 7% |