Financial Performance Evaluation of Hydropower Companies in Nepal

(A Comparative Study on Butwal Power Company Limited and Khoranga Hydro Power Company Limited)

A THESIS PROPOSAL

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SUBMITTED TO:

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Birtamod, Jhapa

2014, January

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CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Nepal is rich in natural endowments hydro potential, natural beauties, diverse flora, fauna and many different tribes and ethnic group. Hydropower generation is one of the four main economic growth sectors. Linking biodiversity and hydro-energy provide great promise for the economic prosperity of the country.

Hydropower is a vital input needed to fuel the engine of economic growth and to fulfill the basic needs of the entire population of a country. Energy differentiates a developed or developing economy from a developed economy. Empirical evidence suggests that lack of energy can whittle down the pace of economic development white its abundance can stimulate the development. Data show that on an average an American consumes approximately 40 percent more energy than an Indian does. This stark gap in consumption levels may safely be attributed to the government's failure to maintain an appropriate ratio of hydro and thermal power and not properly harnessing hydropower that is possible only through the construction of large river valley projects. Apart from storing water, river valley projects not only produce electricity but also ensure cleanliness of the air in the process.

Hydropower is the most critical input for agricultural, industrial production, it & telecommunications and raising the quality of life of people. The government's own statements amply confirm that it is well aware that the "marginal productivity" of power in the rest of the economy is far greater than the cost of power. This means that power in rest of the economy is far greater than the cost of power. This means that power development ought to be the top most economic priority of the state. It also means

that there is an opportunity for deficit financing of power projects, so that the required additions to capacity to match demand need not suffer for want of resources. Only a dogmatic monetarist position would insist on identifying the finances for power development with required additions to capacity to match demand need not suffer for want of resources .only a dogmatic monetarist position would insist on identifying the finances for power development with required savings for the economy as a whole. Deficit financing in the case of power (if tight implementation schedules can be adhered to) need to be inflationary given the extremely high marginal product of power in industry and agriculture with the extra power availability, if output can go up.

Hydropower projects in Nepal have been deemed to be expensive primarily because of the fact that cost of access roads and power evacuation transmission lines are added on to the hydropower projects cost. As well all know, most of the better hydropower projects sites are in remote mountainous locations requiring construction of access roads prior to projects construction. This along with the high voltage power evacuation system renders power from these projects comparatively expensive. This can lead to hydropower projects losing their competitive advantage with respect to other sources in the energy market. It is in this context that government of Nepal, donor agencies and multilateral lending agencies should change their focus towards development of trunk highways in the major river valleys of Nepal. Similarly, high voltage trunk transmission lines should also be developed in these river valleys. This will lead to opening up these river valleys for private power producer companies to develop power projects around these rivers and their tributaries resulting in less expensive power and adding to the competitive advantage that this clean from of energy has.

An ideal way to develop the medium to larger scale projects in Nepal would be through private- public partnership. Since this scale of projects involves larger risks with more expensive risk-

mitigating measure, sharing of risks, capital investment and benefits would be the preferred way to develop these projects.

The private sector is taking greater strides towards economic activities such as power project development and believes that it should have a greater role in the decision- making process of the government when it comes to national economic issues and also in bilateral and multilateral issues which have a direct impact on this industry.

1.2 Statement of the Problems

Nepal has an enormous hydropower potential, the prospects of becoming a prosperous country can be realized provided this energy source could be tapped prudently and efficiently at the earliest. As a leader of the countries power sector, NEA has the prime responsibility of taking necessary steps towards achieving this goal.

To get the private sector sustained it needs enough income for its shareholders and employee. By keeping other factors constant, income can be increased by better performance which increases efficiency and effectiveness of human and non-human production factors. Butwal Power Company (BPC) and Khoranga Hydro Power Company (KHPC) also have their own capital mix, management, employees and assets. This study tries to seek that the company's overall performance is good, better or worse.

Finance is one of the most important functional areas of a business. It is concerned with generation, transmission, distribution and other function of any business including independent power products. The problem toward which this study's directed is to identify and analyze the financial strengths and weakness of hydropower companies of Nepal. Here BPC and KHPC. Besides the study attempts to seek answer of the following questions.

- What is the financial positions and performance of the companies?
- Do the Financial Ratios best describe the performance of these hydropower companies?
- What types of contemporary steps are essential for performance improvement of Nepalese hydropower companies?
- What level of satisfaction on provided to the stakeholders by these private-public sectors hydropower companies?
- Which company is more effective and efficient of financial performance?
- Do the private and public power producer companies feel secure to invest in the Nepalese hydropower sectors?

Financial Evaluation may not provide exact answer to these questions but it does indicate what can be expected in the future.

1.3Objectives of the Study

The study basically aims to evaluate the financial performance of Butwal Power Company Limited (BPC) and Khoranga Hydro Power Company Limited (KHPC) and to suggest recommendation based upon it the specific objectives of the study will be:

i) To study and analyze the financial performance of BPC and KHPC and draw comparative conclusions through financial evaluation taking relevant variables.
ii) To identify major strengths and weaknesses of BPC and KHPC.
iii) To study and examine the present trends of financial performance of Private – Public participations in Hydropower Sectors.
iv) To provide necessary suggestions on the basis of study findings.

1.4 Significance of the Study

Analysis of financial position and statement is a crucial part of financial decision making process of a business enterprise. Poor financial management affects adversely on liquidity turnover and profitability. It is required to measure the financial position of the business big or small. KHPC is one of the promising names in the sector of power generation business and the private sector of hydropower.

Nepal as a developing country needs more and more new energy success to meet the ever increasing demand for socio-economic development and industrialization of the country. In this back drop, hydropower is the only resource available abundantly in all hilly and mountainous parts of the country. Access to electricity promotes new economic activities, empowers women by reducing domestic drudgery in firewood collection, improves health and education service and provides a cleaner and healthier home environment.

This study attempts to provide information and draw the attention of private and non governmental agencies that are willing to invest in hydropower projects in Nepal.

This study also expects to provide some appropriate measures to solve financial problems of Nepalese private public sector hydropower companies if any researchers who are interested in the study of the financial performance of similar hydropower business may find this study of use.

1.5 Limitations of the Study

The main purpose of this study is to conduct a crucial research on the financial performance evaluation of private Public hydropower sector for the partial fulfillment of MBS degree. In this way this study possesses some limitations that are mentioned as follows:

- The study covers a period 5 years firm the first fiscal year 2008/09 to the recent fiscal year 2012/13 of BPC and KHPC but the main focus is on financial factors.
- The secondary data is basic input of the study and thus accuracy of conclusions derived from them highly depends upon the reliability of these data.
- Science the study is mainly concerned with BPC and KHPC out of various hydropower companies in operation, the conclusion drawn from the study, and suggestions offered may not be applicable to any other private or public hydropower companies.
- Resources (Time, Money etc) are limited.
- This study may not be precise as it is to fulfill the partial requirement of the MBS Program.

CHAPTER 2

REVIEW OF LITERATURE

2.1 Literature Review

Review of literature is the Process of learning and Understanding the concept of the related topic. After selecting the topic of research, Researchers should study different Materials (like Books, Journals, Magazines, Newspapers, Articles etc) to collect the information's about the subject Matter of the Study. This process of studying different education Materials which are related with the selected topic of the research is called "review of Literature". In other words Review of Literature means to collect the necessary information about the research topic through the different sources. After the deep study of conclusions, merits, demerits etc. May be known and further research can be conducted (Silwal, 2062B.S.; p. 13).

In this Chapter the Review of various books, research studies have been made to make clear about the concept of performance analysis as well as to recall the theories and previous studies made by various researchers. Nepal being one of the rich countries in hydropower Sector, Many important literatures are available in this field. This chapter Reviews the available literature relating to hydropower sector and various expressed by various Scholars and researchers on the financial performance of private and public enterprises.

2.2 Related Studies

Hydropower development has always been vital issue for lots of Nepalese writers and researchers. This Section/ topic is devoted to the review of some major articles published in Journals, reports, newspapers and articles concerning state and problems of hydropower development in the country and financial performance of private -public hydropower Companies or NEA.

In the journal **VIDYUT** (Year18, issue1, 2064 Bhadra), **Mr. Prachar Pradhan** on his article entitled “Challenges and issues on the domestic hydropower projects and perspective on export oriented hydropower projects” has the written about hydropower potential, hydropower generation, existing status, power demand forecast by 2020 for domestic scenario and power generation expansion (NEA and IPP).

He said about hydropower potential of Nepal that, the Karnali and Mahakali river systems represents approximately 43 percent of Nepal theoretical hydropower potential and 55 percent of the technical/ economical potential.

Now the total installed capacity in NEA integrated system is 719.6 MW including the 607.1 MW hydro plants owned by the private sector and NEA’s thermal power (Diesel) of 10 MW. Although total hydropower capacity in the system is 1094.62 MW, only about 719.6 MW can be generated from hydropower stations during the winter season when the power demand will be at its peak. During the time of power deflect; about 102.5 MW is imported from India as per the indo- Nepal power exchange agreement. Nepal and India have agreed in principle to increase this level of exchange from 50 MW and above at agreed rate. Nepal is also entitled to 70 million units of energy annually from Tanakpur in the far west under the Mahakali Treaty. NEA continues to be sole purchase of independent power producer (IPP) Power. To date, twenty two Power Purchase Agreements (PPA’s) totalling 173 MW have been concluded of which 102.5 MW have already been commissioned (as per Annual Report of NEA 2013/13).

CHAPTER 3

RESEARCH METHODOLOGY

Research is a systematic and organizes effort to investigate a specific problem that needs a solution. This process of investigation involves a serious of well- thought- out activities of gathering, recording, analyzing and interpreting the data with the purpose of finding answers to the problem, thus the entire process by which we attempt to solve problems or search the answers to questions is called research (Wolf and Pant, 2005,p.4).

A suitable and simple research methodology is followed in order to achieve the stated objectives of the study and as well as to make it easier in visualizing the total study clearly. This chapter includes research design, sources and types of data, data gathering instruments and procedures and tools for analysis.

3.1 Research Design:

Research design is the plan, structure and strategy of investigation conceived so as to obtain answer to research questions and to control variable. The plan is the overall scheme or program of the research. It includes an outline of what the investigator will do from writing the hypothesis and their operational implications to the final analysis of data. The structure of the research is more specific. It is the outline, the scheme, the paradigm of the operation of the variables. Research design is the plan of attack: what approach to the problem will be taken? What methods will be used? And what strategies will be most effective (Wolf & Pant, 2005; p. 92.).

The Comparative evaluation of HPL and KHPC, descriptive and analytical approaches were used to evaluate the financial performance of these hydropower companies. Descriptive approach is utilized for conceptualization, problem identification, conclusion and suggestion of the study where as analytical approach will be followed the presentation and analysis of data. The data have been analyzed on the basis of standard financial formulas used in the books of financial management.

3.2 Population of Sample:

Total Number of Private – Public Company Operated in Hydropower Sectors of Nepal Are Population. In Current Situation There are 42 Company in Operation (The Name of the Population are Listed Below). Among them I select Two Company as a sample of study by using random sampling Method.

Name of the Private & public sectors Hydropower Companies, which are connected to INPs

1. Himal power Limited (HPL)
2. Butwal Power Company Limited (BPC)
3. Bhotekoshi Power Company Private Limited (BKPC)
4. Chilime Hydropower Company Limited (CHPCL)
5. National Hydropower Company Limited (NHPC)
6. Khudi Hydropower Limited (KHP)
7. Arun Valley Hydropower Company Private Limited (AVHP)
8. Sanima Hydropower Company Private Limited (SHPC)
9. ThoppaKhola Hydropower Company Limited (THP)
10. Alliance Power Nepal Private Limited (APN)
11. Unique Hydel Company Private Limited (UHC)
12. Khoranga Hydropower Company Limited (KHPC)
13. Gautam Buddha Hydropower Company Limited
14. Rairang Hydropower Development Company Private Limited (RHPD)
15. Kathmandu Small Hydropower (KSHP)
16. Sange Bidyut Company Limited (SBC)
17. Kantipur Hydro Power Company
18. Gandaki Hydro Power Company
19. Barun Hydro Power Development Company
20. Power Development Limited
21. Bhagawati Hydro Power Development Company
22. Nyadi Group Limited
23. Upper Charnawati, Dolakha
24. Bhairabkunda Hydro Power Pvt. Ltd
25. Nepal Hydro Power Developer Pvt. Ltd

26. Shivani Hydro Power Company
27. Bojini Company Pvt. Ltd
28. Ridi Hydro Power Development Company
29. Synergy Power Development Company
30. Nepal Hydro Development Company
31. Triyog Energy
32. Annapurna Group Pvt. Ltd
33. Radhi Bidhyut Company
34. Joshi Hydro Power Company
35. Api Power Company Pvt. Ltd
36. Sunkoshi Hydro Power Company
37. Annapurna Group Pvt. Ltd
38. Mailung Khola Hydro Power Company
39. Thoppal Khola Hydro Power Company
40. Hydel Company
41. Himal Dolkha Hydro Power Company
42. Ankhu Khola Jal Bidhyut Company Limited

(Source: Annual Report of NEA Fiscal Year 2012/13)

Name of the Sample Companies;

1. Butwal Power Company Limited (BPC)
2. Khoranga Hydro Power Company (KHPC)

3.3 Data Collection Procedure:

For purpose of this study, following methods/ techniques are used:

A. **Secondary Data:** The Secondary data are collected from published accounting statements of Khoranga Hydro Power Company, Butwal Power Company Limited, Nepal Electricity Authority and Reports of National Planning Commission. The review of theory relating to this study is based on textbooks, official publication, journals, previous research studies and websites of related Companies, NEA and National Planning Commission.

B. **Primary Data:** Descriptive analysis is made with the help of primary data. Primary data are collected by questionnaire

and meeting with concern people. To get reliable information discussion was also conducted with staff of KHPC and BPC.

3.4 Tools for Analysis:

3.4.1 Tools for Secondary Data Analysis

3.4.1.1 Financial Tools

Financial Tools are those, which are used for the analysis and interpretation of financial data. They attempt to explore the financial state of a business and convey the strengths and weakness of its policies and strategies. Ratio analysis is used as the basic tool for this study in order to summarize the quantitative judgements about the companies, financial performance. The importance of ratio analysis lies in the fact that it presents facts on a comparative basis and enables the drawing of inference regarding the performance of a company (Khan & Jain, 1999; p. 4.33).

3.4.1.2 Statistical Tools

Statistical tools present the relationship among certain variables based on past trend and help predict future values of one or more variable given the change in other associated variables. These tools are useful to researcher in order to draw liable financial consumptions from data available. The following statistical tools are used in this study for evaluating the performance of selected companies.

I .Arithmetic Mean

II. Coefficient of Variation (CV)

III. Coefficient of Correlation (r)

IV. Probable Error of Correlation coefficient (PE)

V. Least Square Linear Trend

3.4.2 Tools for Primary Data Analysis

The Chi- square ($\chi 2$) test is designed to work with nominal data. It provides the researcher with a mathematical way of examining a classification table to see whether the arrangement of values within that table is unusual in some way. In performing this test, the mathematical process will be looking for a significant difference between the observed and expected frequencies. The Chi-square test involves a comparison of two or more responding groups (Wolf and Pant, 2005, p.287).

Since Chi- square test does not make any assumption about population parameters. It is called distribution free test. This test is good for normal or ordinal scale of measurement. Chi-square test is also used for analysis of quantitative variables, such as opinions of people, religious affiliation, smoking habits and so on. Chi-square test is a test that describes the magnitude of difference between observed and expected (theoretical) frequencies under certain assumptions. In other words, it describes the magnitude of the discrepancy between theory and observation.

3.5 Analysis & Presentation of Data:

This Section includes the data related with the study from secondary sources. Secondary sources mean the data of the private-public sectors hydropower companies derived from their annual reports, webpage and other already published sources. The presentation and analysis of these numerical dates include ratio analysis and correlation analysis.