

# Capital Budgeting Practices in Nepali Manufacturing Companies

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**Abstract:** *The paper analyses the capital budgeting (CB) techniques and other related practices of Nepali manufacturing companies. Based on the survey conducted in the month of September 2010 in the Kathmandu Valley through a structured questionnaire, the study assessed different aspects of the capital budgeting practices of 40 Nepali manufacturing companies. On the basis of analysis, the study found that CB decisions are largely centralised to the higher rungs of the organisation. It has also shown the Nepali companies shifting towards the increased use of sophisticated, discounted model for the capital budgeting evaluation.*

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## I. INTRODUCTION

Sound capital investment decisions are critical to the survival and long-term success of firms, and therefore, they are considered as a strategically important decision for overall growth of the firm and its financial health.

According to Leon et al. (2008), finance theory stipulates the use of discounted cash flow (DCF) techniques, which come in the form of the Net Present Value (NPV) and the Internal Rate of Return (IRR), as the most appropriate criteria in evaluating capital investments. Similar to a large extent are the studies of Bennouna et al. (2010) and; Jog and Srivastava (1995); Arnold and Hatzopoulos (2000); Trahan and Gitman (1995); and Graham and Harvey (2001). In addition, Hendricks (1983) and; Garham and Harvey (2001) provided the evidence that another competing non-DCF based technique exists, such as the Payback Period; it is also widely used by companies. Kester et al. (1999) found that the payback period for investment decision was still an important method. The question that begs investigation is whether or not companies

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do actually use the "correct" techniques to evaluate capital projects including risk. Survey evidence suggests a widespread use of DCF methods. Thus, the paper seeks to examine the capital budgeting evaluation practices in Nepali manufacturing companies.

The next section discusses the review of literature. The sample and survey methods adopted are discussed in the third section. The fourth section presents the survey results while the last section contains the conclusions from the study.

## **II. LITERATURE REVIEW**

Trends towards sophisticated techniques for evaluation of capital budgeting have continued; more particularly, the discounted cash flow (DCF) has become the dominant evaluation method over other non-DCF techniques in the recent years, for example, in Canada (Bennouna et al. (2010) and; Jog and Srivastava (1995); the UK (Arnold and Hatzopoulos, 2000) and the US (Graham and Harvey, 2001).

On the contrary, in one of the earliest studies in the US, Kalmmer (1973) showed that 19 percent indicated that they used DCF methods as their primary method to evaluate projects based on the 1959 survey. A majority of the firms used either Payback (34 percent) or Accounting Rate of Return (34 percent) as their primary method of evaluation. In 1970, the picture had changed dramatically. Some 57 percent of the firms used the DCF methods, while 26 percent opted for the Accounting Rate of Return and only 12 percent applied the Payback method as their primary technique of evaluation.

Trahan and Gitman (1995) reported that a majority of the firms used DCF methods (NPV and IRR) as their primary evaluation tool. In another survey of capital budgeting technique in the US and Canada, Graham and Harvey (2001) showed that the NPV and IRR techniques are the most frequently used capital budgeting techniques. The survey reported at 75 percent of the CFOs always used NPV and 76 percent always or almost always used the IRR method. The survey results also showed that the payback period method remains to be important as a secondary instrument.

According to Hendricks (1983), 65 percent of the firms in the sample used Payback Period as a secondary measure. On the contrary, Trahan and Gitman (1995) found Payback Period as one of the major evaluation tools. Similarly, Garham and Harvey (2001), 57 percent of the firms indicated that they used Payback one of their evaluation tools. Ashley et al. (2000) provided results that the most popular primary capital budgeting techniques selected were the sophisticated or DCF methods, like net present value and internal rate of return. The payback method was selected merely as a secondary technique.

The NPV was a key strategic investment measure for project evaluation (Carr and Tomkins, 1998). But European countries reported lower rates of the use of DCF techniques as compared to U.S. firms (Brounen et al., 2004). Similarly, Graham and Harvey (2001) found that 47 percent of the U.K. forms (almost) always used the Payback Period.

Baker and Fox (2003) found, in their study on 100 large UK firms, that the use of NPV increased from 32 percent in 1975 to 74 percent in 1992. Abdel-Kader and Dugdale (1998) showed that the UK manufacturing companies noted that Payback was rated as marginally more important than sophisticated methods (e.g., NPV).

In the Asia-Pacific region, Wong et al. (1987) found that in the Asian countries: Malaysia, Hong Kong and Singapore, the Payback Period method was the most popular primary measure for evaluating and ranking projects. For Malaysia, the evidence was confirmed by Han (1986). Kester et al. (1999) study based on Australia, Hong Kong, Indonesia, Malaysia, the Philippines and Singapore, reported that the payback period method is still an important method. Yet, DCF methods seemed to have increasing popularity in these countries, excluding Australia from the sample countries, about 95 percent of the firms in the five Asian countries indicated that they used the Payback Period method and 88 percent of them applied the NPV method when evaluating the projects.

The use of discounted techniques, most sophisticated techniques for the evaluation of capital investment projects, like IRR and NPV methods, is gradually increasing as compared to the previous studies of Istavan (1961) and Fremgen (1973) of the US, UK, Australia and European companies. They found that the risk analysis is becoming more sophisticated. Despite the increased sophistication, authors have pointed that there was a wide variation among firms in the use of capital budgeting techniques. From the analysis of size, risk, surrogates of the firms, large firms were found to be able to use more sophisticated capital budgeting techniques than the small firms. They have indicated that, in general, the firm's economic variables were not decisive in the capital budgeting decision.

In context of Nepal, Pradhan and Adhikari (1998) found that most of the Nepali companies used unsophisticated and non-discounted cash flow (NDCF) techniques. However, Poudel (2006) reported that the capital investment evaluation techniques being used in Nepal changed from unsophisticated to sophisticated techniques, and the Nepali companies also used the DCF technique to determine capital budgeting decisions.

In view of the conflicting results of the studies concerning the use of capital budgeting techniques, the paper has sought to assess the practices of Nepali manufacturing companies in this regard.

### **III. METHODOLOGY**

This study is based on descriptive and exploratory techniques of research methodology. It primarily follows the approach that has been followed by Jog and Srivastava (1995) and Kester et al. (1999). Based on the survey (as on September, 2010) of Nepali manufacturing companies sampled from those headquartered in the Kathmandu Valley by using the convenience sampling method, the study has used the primary data to analyse the capital budgeting (CB) practices.

Containing 18 close-ended questions, the survey questionnaire was designed in four parts, it sought information on respondents' profile, CB planning techniques practised and planned by the companies, and risk definition. Similarly, it also aimed at collecting information on the firms' policy and practice on required rate of return and methods to estimate cost of equity capital, and on factors affecting the firms' CB decisions, among others.

## IV. SURVEY RESULTS

### *4.1 General Observation of Data*

To obtain results on Nepali manufacturing companies' practice of capital budgeting, the following data have been analysed.

#### *4.1.1 Respondents' Profile*

Out of the 67 manufacturing companies on which the questionnaires were administered, the researchers received 40 usable responses registering a 60 percent response rate.

Table 1: Respondent Details

Position	Number	Percentage	Work Experience	Number	Percentage
CEO/ MD	8	20	Less than 5 years	22	55
FM/ Accountant	18	45	5 – 10 Years	7	18
Others	14	35	10 -15 Years	9	22
<b>Total</b>	<b>40</b>	<b>100</b>	15 and above	2	5
			<b>Total</b>	<b>40</b>	<b>100</b>

**Source:** Survey, 2010

Table 1 shows that almost half (45 percent) of the respondents were financial managers or accountants, in the surveyed companies while one fifth (20 percent) were CEOs and Managing directors. Responses from such highly placed officials responsible for capital budgeting decisions in their respective companies are expected to add value to the study.

On the other hand, 45 percent of the respondents had the work experience of 5 and more years; out of them only 5 percent had 15 years or more in their respective companies. More than half of the respondents had less than 5 years' experience.

#### *4.1.2 Positions Involving in Evaluation of Capital Budgeting Plan*

Capital expenditure projects require the long-term commitment of funds and cover a long period of time. Consequently, the elements of uncertainty and risk are almost always present in capital investment decisions. So the study seeks to look into who (key person) performs the evaluation of capital budgeting plans.

From Table 2, it is clear that board chairmen and managing directors/chief executive officers evaluated the capital budgeting projects in most firms, as these two groups of

officials made CB decisions in 27 percent of firms each. It is the department head in one fourth of the companies elsewhere. The cases where investment committee was assigned to this responsibility are rare at 8 percent.

Table 2: Positions Involved in Capital Budgeting Evaluation

Positions	Number	Percentage
Board Chairmen	11	27
Directors	5	13
Managing Director/ Chief Executive Officer	11	27
General Manager	0	0
Departmental Head	10	25
Investment Committee	3	8
<b>Total</b>	<b>40</b>	<b>100</b>

**Source:** Survey, 2010

#### *4.1.3 Generation of Capital Budgeting Ideas*

Since idea generation is the first and crucial step in the capital budgeting process, the study sought the answer as to who generates the ideas for new capital investments. In most Nepali manufacturing companies (32 percent), board chairmen did it. In 25 percent each of other firms, managing director or chief executive officers and department heads generated capital budgeting ideas. In less than 10 percent cases, ideas came from other officials or authority bodies.

Table 3: Positions Generating of Capital Budgeting Ideas

Positions	Number	Percentage
Chairmen	13	32
Directors	4	10
Managing Director/ Chief Executive Officer	10	25
General Manager	0	0
Departmental Head	10	25
Investment Committee	3	8
<b>Total</b>	<b>40</b>	<b>100</b>

**Source:** Survey, 2010

#### *4.1.4 Capital Budgeting Plans During the Last and Next Five Years*

Out of the six different capital-budgeting plans, most firms expanded existing operations, as this plan was ranked first not only as the one practised for last five years but also as one preferred for next five years. This plan was followed by 'expansion of new plans.' Then, replacement and leasing were ranked as moderately practised plans while foreign operations and abandonments came up seldom in the past and future (5 years each). The plans were ranked on the basis of their respective mean values.

Table 4: Capital Budgeting Plans Practised for the Last and Next Five Years

Investment plans	Last Five Years		Next Five Years	
	Mean*	Rank	Mean*	Rank
Expansion of existing operations	1.27	1	1.38	1
Expansion of new operations	2.47	2	2.11	2
Replacement Projects	2.55	3	2.68	3
Leasing	4.20	4	4.11	4
Foreign operations	4.70	5	4.96	5
Abandonment	5.82	6	5.83	6

\* These estimates are based on 40 responses.

**Source:** Survey, 2010

#### *4.1.5 Size of Capital Investment during the Periods of Past and Next Five Years*

Size of capital investment in the production process plays a vital role in the manufacturing companies. In this respect, more than one third (37.5 percent) of the companies for last five years had their capital investment sized Rs. 50-100 million, and one fourth (25 percent) companies are planning to keep themselves in this size in next five years also. But for next five years, 30 percent of the manufacturing companies are planning to size their capital investment within Rs. 10-50 million. Thus, most of the manufacturing companies are planning to downsize their capital investments in the future. It indicates their decreasing level of business confidence in Nepal.

Table 5: Size of Capital Investment during the Periods of Past and Next Five Years

Size of Capital Budgeting	Past Five Years Period		Next Five Years Period	
	Number	%	Number	%
Less than 10 million Rupees	8	20.0	10	25
10 – 50 Million Rupees	9	22.5	12	30
50 – 100 Million Rupees	15	37.5	10	25
More than 100 Million Rupees	8	20.0	8	20
	40	100	40	100

**Source:** Survey, 2010

#### *4.1.6 Major Financial Objectives of Capital Investment Decisions*

As Table 6 reveals, the objective to maximise percentage return on asset investment was most preferred (mean value 1.45) by Nepali manufacturing companies. The objectives ranked second and third were to maximise aggregate rupee earnings (mean value 1.95), and target earning per share (mean value 2.85) respectively. Interestingly, the goal of maximising target market price per share was least popular among the respondents.

Table 6: Financial Objectives of Capital Budgeting

Rank 1 was assigned to the most important financial objective and 4 to the least important one. The lowest mean indicates the most important objective while the least important by the highest mean value.

Financial Objectives	Percentage of responses	
	Mean*	Rank
Maximisation of percentage return on asset investment	1.45	1
Maximisation of aggregate rupee earnings	1.95	2
Maximisation of target earnings per share	2.85	3
Maximisation of target market price per share	3.75	4

\* These estimates are based on 40 responses.

**Source:** Survey, 2010

#### 4.2 Capital Budgeting Techniques

The survey also sought information on the Nepali manufacturing companies' practice of choosing capital budgeting techniques from traditional as well as modern ones.

##### 4.2.1 Ranking of Capital Budgeting Techniques

Among the different techniques to evaluate capital budgeting projects, some are based on non-discounted cash-flow approach and therefore, they are traditional, while others are the sophisticated methods that adopt a discounted cash-flow approach.

From Table 7, the Net Present Value (NPV) method appears as most practised or popular with the mean value of 2.23. The Internal Rate of Return (IRR) approach was ranked the second followed by the Payback Period (PBP), Accounting Rate of Return (ARR), Profitability Index (PI) and Modified Internal Rate of Return (MIRR) approach as the third, fourth, fifth and sixth respectively. The finding of ranking the Net Present Value (NPV) and Internal Rate of Return (IRR) as first and second has come as a conspicuous one, as they both belong to the discounted approach. The results are consistent with the previous studies of Bennouna et al. (2010), Jog and Srivastava (1995), Arnold and Hatzopoulos (2000) and Leon et al. (2008). All these studies found that the majority favoured net present value (NPV) and internal rate of return (IRR) for evaluation of their investment decisions. Similarly, the current study has found that the Nepali companies least preferred the Modified Internal Rate of Return (MIRR) as the capital budgeting technique.

Table 7: Ranking of Capital Budgeting Techniques

Rank 1 was assigned to the most preferable techniques and 6 to the least preferred ones. The lowest percentage mean value indicates the most preferred capital budgeting techniques while the highest value indicates the least preferred ones.

Capital Budgeting Techniques	Percentage of responses	
	Mean*	Rank
Net Present Value (NPV)	2.23	1
Internal Rate of Return (IRR)	2.37	2
Payback Period (PBK)	2.78	3
Average Rate of Return (ARR)	3.44	4
Profitability Index (PI)	4.19	5
Modified Internal Rate of Return (MIRR)	5.72	6

\* These estimates are based on 40 responses.

**Source:** Survey, 2010

### 4.3 Risk in Investment Decisions

A central aspect of any capital budgeting decision relates to risk-taking. The study has looked into various aspects of risks associated with the CB decision of Nepali business organisations.

#### 4.3.1 Definition of Risk

Obviously, the amount of risk involved in each capital budgeting project should be carefully evaluated because it plays a very important role in the success or failure of the projects.

Table 8 reveals that the varying views of Nepali manufacturing companies regarding what risk in investment decision means to them. Analysed thus, Nepali managers have most defined such a risk as 'the uncertain market potential'; with the mean value of 2.05 to place it at the first rank. It was followed by its definition as the 'variation in return' and 'success ratio' ranked second and third respectively. While Nepali managers just moderately viewed risks as 'probability of not achieving target return,' and 'payback period uncertain,' they rarely defined it as 'entering into inexperienced area' (mean value of 4.91).

Table 8: Definition of Risk in Investment Decision

Rank 1 was assigned to the most suitable definition and 6 to the least suitable definition. The lowest mean indicates the most suitable definition while the highest mean value indicates the least suitable definition of risk in capital budgeting decisions.

Definition of Risk	Percentage of Responses	
	Mean*	Rank
Uncertain market potential	2.05	1
Variation in Return	2.89	2
Success ratio (Potential loss/gain)	2.91	3
Probability of not achieving target return	3.35	4
Uncertain payback period	3.93	5
Entering into inexperienced area	4.91	6

\* These estimates are based on 40 responses.

**Source:** Survey, 2010

#### 4.3.2 Assessment of Risk in Capital Budgeting

Assessment of risk is considered as one of the critical stages for the firms to evaluate costs and benefits from the long term investment decisions. The risk assessment practices of managers of the Nepali business organisations are classified and presented below.

From Table 9 it is clear that a majority (50 percent) of the Nepali manufacturing companies evaluated the capital expenditure plans by assessing risks subjectively. Another 30 percent of the companies assessed the risk quantifying it on an individual project basis whereas remaining 20 percent of them no way assessed the risk at all.



Table 9: Assessment of Risk in Capital Budgeting

This table shows number of frequencies (N) and percentage (%) of the Nepali manufacturing companies that assess risk in their investment decisions in three different ways.

Assessment of Risk	Number	%
Risk is quantified on individual project basis	12	30
Risk is assessed subjectively	20	50
Risk is not assessed at all	8	20
<b>Total</b>	<b>40</b>	<b>100</b>

**Source:** Survey, 2010

#### 4.3.3 Accounting Risk while Evaluating Capital Budgeting Projects

The evaluation of capital budgeting proposal is made with the consideration of risks which are to be accounted. The following discussion highlights how the Nepali manufacturing industries take risks into account while evaluating capital budgeting project.

Table 10 shows that almost one third (32.5 percent) of the Nepali manufacturing companies used the sensitivity analysis technique to account the risk in the evaluation of capital budgeting projects. The subsequent accounting methods were the required rate of return (i.e. 22.5 percent), shortening payback period (20 percent), and determining probability of cash flows (7.5 percent). No company, however, opted for measuring interdependencies of projects, whereas about 17.5 percent of the companies used no formal technique to account the risk in capital budgeting. The result contradicts with the theory that recommends the techniques of 'raising required rate return' (adjusted discount rate of return) and 'determining the probability of cash flows.' It also contrasts from the findings of Mao (1970). However, the current study has come in line with a Canadian research, as Bennouna et al. (2010) also showed the sensitivity analysis as the most preferable technique.

Table 10: Accounting of Risk in Capital Budgeting

This table shows number of frequencies (N) and percentage (%) of responses of the Nepali business organisations to the question, how they take risk into account vis-à-vis six options while evaluating capital budgeting projects.

Techniques of Accounting for Risk	Overall	
	Number	%
Sensitivity analysis	13	32.5
Raising required return	9	22.5
Shortening payback period	8	20.0
No formal techniques is in use	7	17.5
Determining probability of cash flows	3	7.5
Measuring interdependencies of projects	0	0
<b>Total</b>	<b>40</b>	<b>100</b>

**Source:** Survey, 2010

#### *4.3.4 Minimum Required Rate of Return for the Evaluation of Capital Budgeting*

Minimum return standard is the minimum acceptance rate of return (discount rate) on proposed capital investments and it is crucial for the selection of the best capital budgeting proposal. The study looked into how the Nepali manufacturing enterprises determine a minimum required rate of return for evaluating the capital budgeting projects.

From Table 11, it is clear that the largest number (45 percent) of Nepali manufacturing companies used the 'management determined target rate of return' as the minimum required rate of return to evaluate the capital investment projects. It was followed by the method of weighted cost of sources of fund (32.5 percent). Thus, these two methods were most practised by Nepali managers. While almost one third (32.5 percent) of them applied the weighted cost of sources of funds, fewer enterprises followed the cost of specific source of fund (10 percent), firm's historical rate of return (10 percent) and firms' historical rate of return (2.5 percent). The results are consistent with the study of Bennouna et al. (2010) as it discovered majority of the Canadian firms used the techniques of management target rate of returns (50 percent) and weighted average cost of capital (76.1 percent).

Table 11: Minimum Required Rate of Return for the Evaluation of Capital Budgeting

Alternatives of Minimum Required Rate of Return	Overall	
	Number	%
Management determined target rate of return	18	45.0
Weighted cost of sources of fund	13	32.5
Cost of specific source of fund	4	10.0
Firm's historical rate of return	4	10.0
Industries' historical rate of return	1	2.5
<b>Total</b>	<b>40</b>	<b>100</b>

**Source:** Survey, 2010

#### *4.3.5 Methods of Estimating Cost of Equity Capital*

Cost of equity is an important factor to determine the weighted average cost of capital in capital budgeting decisions. Interestingly, Nepali managers were well-dispersed in the use of different techniques for estimating the cost of equity (Table 4.12). Cost of debt plus risk premium seemed to be used most often with more than half (53.5 percent) of the respondents opting for this technique. And, 31 percent and 15.5 percent of the total respondents also preferred dividend yield growth rate and capital assets pricing model (CAPM) respectively.

Table 12: Methods of Estimating Cost of Equity Capital

Methods in estimating cost of equity capital	Overall	
	Number	%
Cost of debt plus risk premium	21	53.5
Dividend yield growth rate	12	31.0
Capital assets pricing method	6	15.5
<b>Total</b>	<b>39</b>	<b>100</b>

**Source:** Survey, 2010

#### 4.3.6 Capital Rationing

Capital rationing places a ceiling in the capital expenditure which sometimes leads to the rejection of viable projects. The factors affecting the managers of the Nepali manufacturing companies in their capital investment decisions are analysed below.

From Table 13, it is evident that the lack of internal finance for capital rationing is the most influential factor, as it was ranked first at 1.52 mean value. The limit set by the external lenders is the least influencing factor in this regard. This result complies with the findings of Kester, et al. (1999) which studied capital budgeting in the Asia-Pacific region where the most cited cause was a limit placed on borrowing by the internal management.

Table 13: Ranking of Factors Determining the Capital Rationing

Rank 1 has been assigned to the factor affecting the most and 4 for the least affecting factor. The lowest mean indicates the most affecting factor while the highest mean value indicates the least affecting factor in capital rationing in capital budgeting decisions.

Factors influencing the capital rationing	Overall	
	Mean*	Rank
Lack of internal finance	1.52	1
Limit set by the Mgmt./BOD/ Shareholders	2.10	2
Lack of External Finance	2.62	3
Limit set by the External Lenders	3.74	4

\* These estimates are based on 40 responses.

**Source:** Survey, 2010

#### 4.4 Cash Flow Forecasting in Capital Budgeting

Cash flow forecasting is an important stage in the capital budgeting decisions. To analyse the practice of cash flow forecasting, the study went on looking into the methods being adopted by Nepali manufacturing companies as stated below.

##### 4.4.1 Methods of Forecasting Cash Flows

Table 14 illustrates that to forecast cash-flows, a majority (i.e., 62.5 percent) of respondent companies applied Management Subjective Estimates (MSE), while 20 percent

practised Quantitative (QUANT) method and 17.5 percent the methods of Consensus of Expert's Opinions (CEO). Thus the MSE is the single largest method practised by Nepali manufacturing companies.

This finding is different than the study of Jog and Srivastava (1995) where most of the Canadian firms used the quantitative method for cash flow forecasting, it was then followed by the methods of management's subjective estimates and consensus of expert's opinions.

Table 14: Methods of Forecasting Cash Flows

Method of Cash Flow Forecasting	Number	%
Management Subjective Estimates	25	62.5
Consensus of Experts Opinions	7	17.5
Quantitative Methods QUANT	8	20.0
<b>Total</b>	<b>40</b>	<b>100</b>

**Source:** Survey, 2010

#### 4.4.2 Quantitative Methods of Cash Flow Forecasting

The study has also looked into which quantitative technique of cash flow forecasting that Nepali manufacturing companies have been using. This specific study was based only on 18 companies that were using quantitative techniques in this regard.

From Table 15, sensitivity analysis has emerged as the most preferred quantitative method for forecasting cash flows in capital budgeting decisions, as it has been ranked first at mean value of 1.03. Sophisticated mathematical modelling and computer simulation method have stood as subsequently preferred practices of Nepali manufacturing companies.

Table 15: Ranking of Quantitative Methods in Cash Flow Forecasting

Rank 1 stands for the most appropriate method, and 3 for the least appropriate method. The lowest mean indicates the most appropriate quantitative method while the highest mean value shows the least appropriate.

Quantitative methods in cash flow forecasting	Overall	
	Mean*	Rank
Sensitivity analysis	1.03	1
Sophisticated mathematical modelling	1.34	2
Computer Simulation	1.88	3

\* These estimates are based on 18 responses.

**Source:** Survey, 2010

#### 4.4.3 Post Evaluation of Investment Decisions

After capital investments have been selected, it is desirable to examine periodically how closely projects' actual initial investments and subsequent cash flows correspond to their previously estimated amounts. Table 16 summarises the practices of post evaluation

of capital budgeting decisions of the Nepali manufacturing organisations.

Table 16 shows that an overwhelming majority of the Nepali manufacturing companies believed in post audit of the capital investment decisions, as all— but 5 percent— of them conducted the post audit. More than half (52.5 percent) of the companies most often conducted the post evaluation of their investment decisions, while 27.5 percent did it sometimes. Another 15 percent companies seldom conducted the post-evaluation.

Table 16: Post Evaluation of Investment Decisions

Post Evaluation of Investment Decisions	Number	%
Most Often	21	52.5
Sometimes	11	27.5
Seldom	6	15.0
Not at all	2	5.0
<b>Total</b>	<b>40</b>	<b>100</b>

**Source:** Survey, 2010

#### *4.5 Qualitative Factors Influencing Capital Investment Decisions*

In line with the concept that not only quantitative but also qualitative factors affect the capital budgeting decisions, the study has looked into qualitative factors in the context of Nepali manufacturing companies.

From Table 17 it is clear that image factors relating to the industry, investor and customer are most influential when companies make the capital budgeting decisions. After that, legal factors, and management goals came in second and third ranks. Far behind have the three factors like 'environment responsibility, employee morale and employee safety' come. While taking long-term investment decisions, Nepali manufacturing companies least considered factors like employees' morale and employees' safety.

Table 17: Ranking of Factors Influencing Capital Budgeting

Rank 1 stands for the most important factor and 6 for least important. The lowest mean value indicates the most important qualitative factor while the highest mean value shows the least important one.

Qualitative factors affecting capital budgeting	Overall	
	Mean*	Rank
Image factors (industry, investor and customer)	1.79	1
Legal factors	2.75	2
Management goals	2.89	3
Environment responsibility	4.40	4
Employee morale	4.41	5
Employee Safety	4.89	6

\* These estimates are based on all 40 responses.

**Source:** Survey, 2010

## V. SUMMARY AND CONCLUSIONS

The current study on various aspects of capital budgeting practices of the Nepali manufacturing companies has covered a large majority of their top and middle-level managers as respondents. In a large majority of companies, the top level managers, including Chairman and Chief Executive Officer or Managing Director reportedly generated the capital budgeting ideas and evaluated capital expenditure plans. This implies that the practice of decentralisation and delegation of authority in making capital budgeting decisions is rare in Nepali manufacturing companies.

Most of the Nepali Manufacturing Companies have undertaken the decisions of capital budgeting plans for the expansion of existing operations not only for the past five years but also for the next five years. A majority of the Nepali manufacturing companies have the average size of capital budgeting projects between Rs. 50 to 100 million for past five years. Yet, in their plan for next five years, the size of capital budgeting would mostly shrink either to less than 10 million or to Rs. 50-100 million. Thus, most of the companies are planning to downsize their capital investments in the future. It indicates their decreasing level of business confidence in Nepal; it may be due to unstable political situations and unfavourable business environment.

The most appropriate financial objective of capital budgeting decision as reckoned by the Nepali managers is to maximise percentage return on asset investment and to maximise aggregate rupee earnings. The financial objective of capital budgeting, i.e., to maximise target market price per share, has emerged as least preferred by the Nepali Manufacturing Companies.

A majority of the studied companies used the sophisticated capital budgeting techniques like Internal Rate of Return (IRR) and Net Present Value (NPV). Earlier, Pradhan and Adhikari (1998) found use of traditional, unsophisticated methods. The current study is therefore a testimony that there has been an increasing shift towards the use of modern, sophisticated techniques.

Whereas to most Nepali managers, risks in capital budgeting mean uncertain market potential and variation in return, most of them use the sensitivity analysis technique and thereafter the raising required rate of return, for the accounting of risk. The technique of determination of probability of cash flows is not popular among Nepali managers in the manufacturing industry.

According to the study, Weighted Average Cost of Capital (WACC) is only the second preference of the Nepali manufacturing companies. Their first preference went to the management determined target rate of return. Similarly, Nepali managers estimated the cost of equity by using the cost of debt plus risk premium method whereas they least used CAPM.

The capital rationing limits the ceiling of the capital expenditure decisions. For Nepali managers, the lack of internal finance is the most influential factor on capital rationing. The limit set by the external lenders is the least influencing factor in this regard. A big

majority of the Nepali managers reported the government policies as influential in their capital budgeting decisions albeit at different frequencies and extents.

In the practice of forecasting cash flows in capital budgeting, majority of the Nepali manufacturing companies used management's subjective estimate method. Of the quantitative methods of cash flow forecasting, the sensitivity analysis is the most preferred one. The practice of post evaluation of capital budgeting decisions is common among the Nepali manufacturing companies so as to conform whether the capital budgeting targets were met. Only few (15 percent) of the managers did without post-evaluation.

Among the qualitative factor most influential in the capital budgeting decisions the Nepali manufacturing companies rated image factors highest. The factor was followed by two more factors: legal and management goals. They least considered the employees' safety and environment responsibility as qualitative factors. This finding is different from the study of Petty et al. (1975) where the legal factors were the most influencing qualitative factors in the capital budgeting decisions of large US corporations.

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