Journal of Resources Development and Management
ISSN 2422-8397 An International Peer-reviewed Journal
Vol.7, 2015

Organizing of Capital Budgeting Process and Financial Theory

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Abstract

The purpose of this study is to find the capital budgeting process which are used by large firms and grasp the reality by getting the information from efficient organizations. Capital budgeting is known as investment appraisal. There are required big amount of funds for capital budgeting (Holmes, 1998). Once an investment proposal starts there incurs a big cost on it and it is not possible to ignore this cost and the reversal of project is also difficult (Holmes, 1998). Opportunities of investment that can produce or give benefit for more than one year are called capital investments (Peterson & Fabozzi, 2002)

On the basis of normative contingency theory a model is structured and the aim for this model structuring is to reconcile the results of some capital budgeting behavioral organizational studies with financial theory. For reflecting the contingent model basic steps, this paper has four sections. In first section paper describe about the capital budgeting process, in second there are definitions of endogenous variables, i.e. variables that defines configuration of process and those variables are internal structural variables; in third section about the exogenous variables or contingent variables and these are external variables that influence the capital budgeting process; in the last examine how capital budgeting process should be formatted and structured and give values to external variables i.e. relationships between the internal with external parameters. In this paper take the organizations and what are the capital budgeting processes that are used in these organizations?
Keywords: Capital Budgeting, Contingency Theory, Strategic Planning Process

Introduction

Over the many years attention on Capital budgeting has increased very much. In a lot of studies the attention has given on the relationship between financial theory and investment decisions and also on behavioral aspect of capital budgeting. Today there have a lot of critique on aspect of capital budgeting like separation between analytical and on organizational behavioral.

There are a lot of methods like strategic options, analytical hierarchy process (AHP), Discounted cash flow methods; these methods cannot led to the branch of organization and cannot supports the investment proposals. There are decision making tools like investment evaluation techniques. These gives current organizations to modify opportunities by give and spread information about the performance of new and advanced technologies, adopting the cross functional analysis procedures, allow the organizations to conduct post audit and all these supports the organizational learning.

In this paper there will also describe to how a lot of studies about the capital budgeting are based or depend upon the financial theory and also how with the passage of time the development sophisticated methods of capital budgeting have gained popularity. The process of analyzing the investment proposal will be also determined. It also develops a conceptual framework about the capital budgeting, its techniques or evaluation methods and also about the capital budgeting decision making process. The importance will be given to problem which integrates the linkages between the strategic planning process and the capital investment coordination. This model will be depends and structured upon contingency theory principles.

Literature Review

The process of acquiring a long term venture or to build a new plant for business is called capital budgeting. Capital budgeting is known as investment appraisal. There are required big amount of funds for capital budgeting (Holmes, 1998). Once an investment proposal starts there incurs a big cost on it and it is not possible to ignore this cost and the reversal of project is also difficult (Holmes, 1998). Opportunities of investment that can produce or give benefit for more than one year are called capital investments (Peterson & Fabozzi, 2002). Capital budgeting is also defined as the best option of financing for the long term investments decisions (Stenzel, 2003). Brewer, Garrison and Noreen (2005) further define capital budgeting as an investment

analysis done by managers to determine which proposal has the best return in future cash flows. Investments are the options of financing in the long term assets. According to Peterson and Fabozzi (2002) the capital budgeting process consists of Investment screening and selection, Capital budget proposal, Budgeting approval and authorization. Capital budgeting is vital, because if it is not properly planned, these investments could have disastrous financial and cash-flow implications(Du tout & Pienaar, 2005; Johnson, 1999).

There are five capital budgeting decision criteria, namely net present value (NPV), internal rate of return (IRR), payback period (PBP), modified IRR (MIRR) and Profitability index (PI) (Brigham & Ehrhardt, 2005).

Capital Budgeting Decision Criteria

NPV is aligned with the goal of maximizing a shareholder wealth; consider the timing of these cash flows and also use of relevant cash flows. In NPV the future cash flows are discounted and if NPV is positive then the project will be acceptable (Els, 2010). If there are more than one project then that project should be accepted which has higher NPV (Drury, 2004). In a survey on 268 U.S. firms the internal rate of return was the mostly used method of that time (Gitman & Forrester, 1977). A similar survey was conducted for large U.S. firms which have also similar results(Scott & Petty, 1984). A survey that was conducted among companies that were existing in Malaysia, Hong Kong and Singapore in 1985 Payback period method was the mostly used primary method for evaluating and ranking projects (Wong, Farragher, & Leung, 1987). A survey in 1992, 58 large firms of the Fortune 500 and 26 small firms of Forbes 200; DCF methods are used by most of firms, although percentage of these for the large firm is 88% (NPV) and 91% (IRR) and percentage for small firms are 65% and 54% respectively (Trahan & Gitman, 1995). Among North American and Western European companies the IRR, NPV and PBP methods are most popular methods (Brounen, 2004; Graham & Harvey, 2001).

Correia et al. (2001) and others (Brigham, Ehrhardt, 2005, p. 360; Horngren et al., 2003, p. 720; Garisson and Noreen, 2000, p. 677) state the advantages of NPV as follows: time value of money concept; all cash flows; showing the risk associated with all future cash flows; and providing more reliable information than any of the other decision criteria because absolute values are used. According to finance theory and based on above advantages NPV method is considered as best method. Besides of some organizations in Canada all other are using NPV method as base method (Karim, Geoffrey, & Teresa, 2010). Because the IRR gives value of investment in percentages the manager considers it attractive because due to this the comparison becomes easy between the projects(Cheng, 1994). Other authors (Baldwin & Clark, 1994; Hayes & Garvin, 1982) argue that the DCF methods focus on measurable effects, and are therefore biased towards short-termism. However, we believe that the use of DCF methods lead to more long term behavior than the use of payback and other accounting ratios in capital budgeting.

Pay Back Method

It is very simple method. It gives the accurate time of returning the amount. The project should be accepted your projected payback time (PB) is equal to/less than the time required by the organization(1988). Payback is the time period in which the initial cash outflows will be recovered from the sum of each year's cash inflows (Peterson & Fabozzi, 2002; Garisson and Noreen, 2000; Correia et.al., 2001). If the time period of project is equal or less than the cut off period then the project should be accepted and if this time period exceeds the cutoff period then project should be rejected.

Internal Rate of Return (IRR)

With the initial investment of a project; it gives present value of cash flows that discount rate is called internal rate of return. When IRR exceeds project cost of capital then that project will accepted(1988). According to Maher, et.al., (1997), McWatters, et.al. (2001) the internal rate of return is that discounted rate at which the presented value of projected future cash flows calculated for each project, equal to present value of initial investment and it causes the net present value equal to zero. IRR and NPV are best but conflicting results arise when we do ranking of mutually exclusive projects. When time and cash flows of projects differ with one another then conflicts arises. If IRR is less than the required rate of return then project must be rejected because it will give the negative NPV.

Modified internal rate of return (MIRR)

MIRR considers better than IRR because in it we use weighted average cost of capital and from this it gives more accurate results than IRR(1988).

Profitability Index

The profitability index is used to evaluate different projects. It gives per dollar cost of present value of benefits. Project is considered to accept if Profitability index is greater and equal to 1(1988). PI is defined as the change in the net projected future cash inflows, discounting back to the present value by using the required rate

of return, and dividing the sum of the discounted cash inflows by the cost of the initial investment (Peterson & Fabozzi, 2002) . If the PI is equal to one, then the NPV is equal to zero. Therefore, if the NPV is positive, the PI will be more than one, but if the NPV is negative, the PI will be less than one.

Structure of Capital Budgeting Process

There are six stages of capital budgeting process that are identified. (a)identification of investment opportunities,(b)development and evaluation, (c)Implementation and control, (d)selection, (e)authorization,(f)implementing and control, (g)Post-auditing (Seitz & Ellison, 2005).

Identification of Investment Opportunities

This is very much important stage but its formulation is very much difficult. Because it is very difficult to check the investment opportunity which will give you profit and which investment proposal will be more benefited for organization. The organizations will see time periods for investments and also see the funds which are available for investments.

Development and Evaluation

The identification of investment proposal is very much difficult and time taking task but when identification of investment has completed then it is very much necessary to analyze them completely; then collecting all the relevant information about alternatives, attractiveness that are globally and also evaluate the profitability of the investment proposal.

Selection

Selection stage is also very much important for organizations because after identification and after the development and evaluation there are a lot of reasons for selecting the investment proposals because some proposal can be rejected due to time period and some can be postponed for some future time period on that span of time it is very difficult to conduct that project.

Authorization

There are proper authorities or personals in organization which will approve the project then the project can be conducted. If these investment committees or management approves the proposal then implementation can be started.

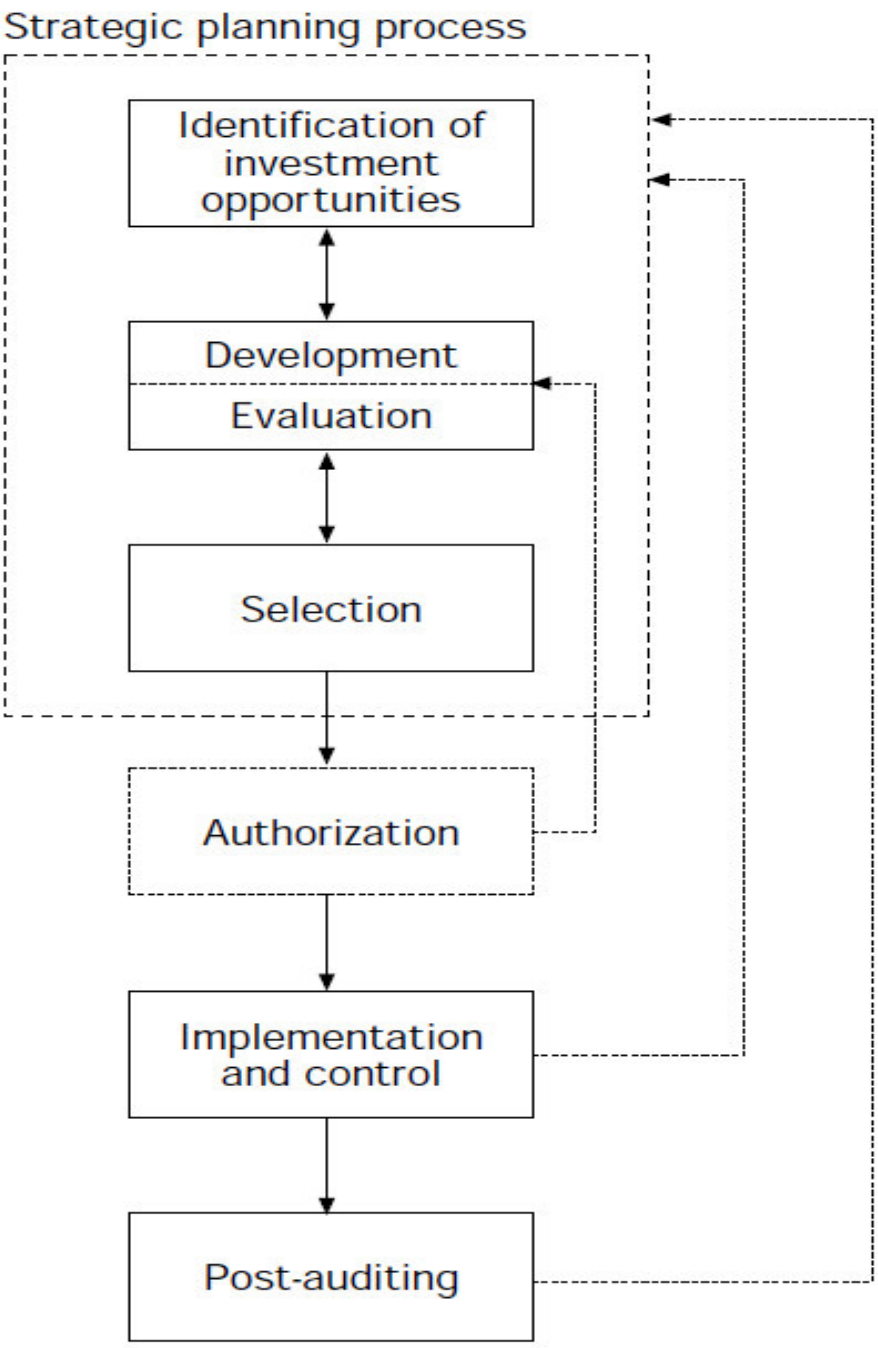
Implementation and Control

Proper control is necessary for implementing the proposal because there are incurring budget costs and there are necessary to meet the deadline which has already determined for the proposal.

Post-Auditing

In this stage, comparison is made between the project and budget targets because to forecast accuracy of the outcomes. And in this stage feedback is given in all the decision making process. The first four stages are called heart of decision making process and last two stages are taken due to their feedback effect.

The structure of the capital budgeting process



In figure it can be seen that most of the work in capital budgeting decision making process is done in the strategic planning process. Link between the capital budgeting process and strategic planning can be seen only in the companies because it cannot be seen in literature. All the investments can be identified in the budgeting stage of strategic planning process. This approach is based on the concept of investment modularity. Capital budgeting decisions can be split into many smaller projects because capital budgeting processes are huge amount of investments called Meta investments. The first three stages called the Meta investment and the remaining three stages called the operational investments. But operational investments stages are also starts from the identification stage.

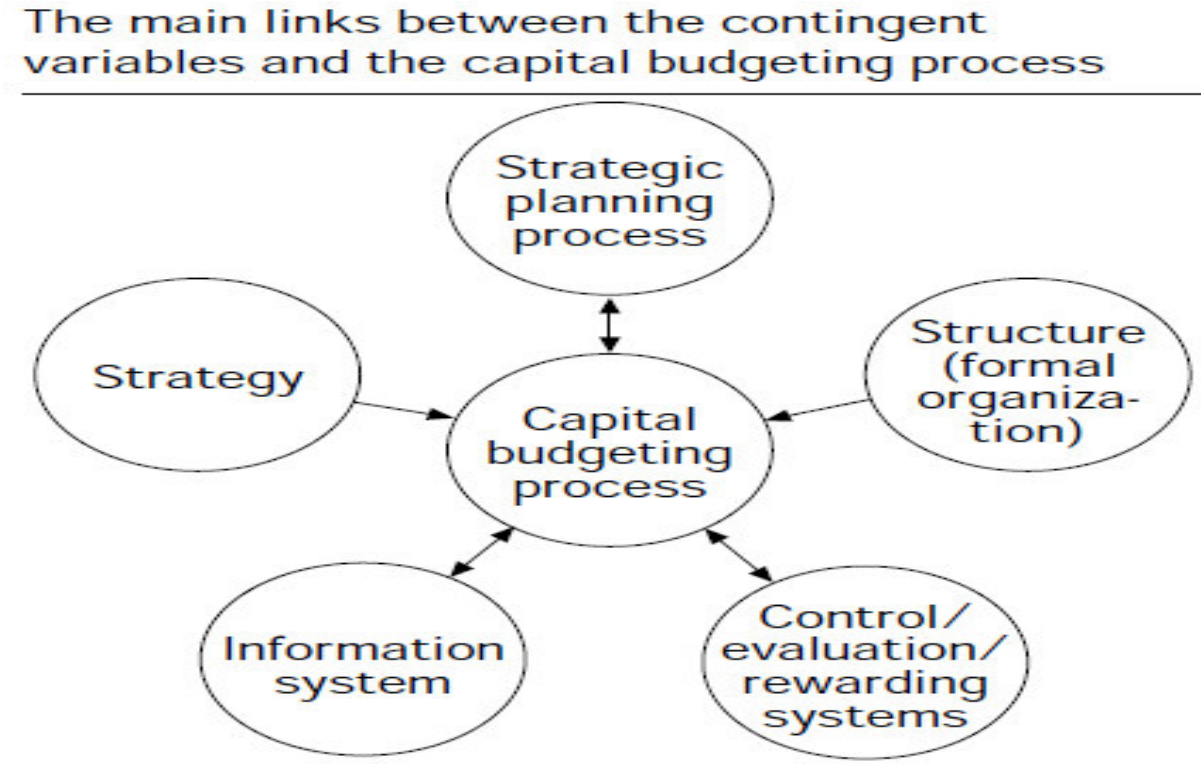
Internal Variables

The second stage is about the identification and definitions of endogenous variables. These variables represent that tools which management can use to make a suitable capital budgeting process. There are identified two classes of variables i.e. first includes that variables which represent organizational parameters and the methodological tools of variables. The problem is to determine the degree of both who should be involved (lateral) and kind of coordination among the systems (vertical).

By decentralization of some activities the problem can be solve. Second, variables consist of capital budgeting process supporting analytical tool. It is important because it plays a key role in selection and also in valuation stage.

Contingent Variable

It is very insubstantial task to identifying the contingent variables. All the interrelationships between capital budgeting process and other procedures of an organization system, external factors and also their complexity are very important task. These variables are classified into environmental, firm-specific and the investment specific variables. Environmental variables are considered as economic financial hostility, firm specific variables which include systems which regulate the capital budgeting process and functioning of organization.



The relationships between above variables and capital budgeting process are of two kinds. Making of a formal organization, according to capital budgeting process requirements is not suitable or is not feasible.

To improve the efficiency of capital budgeting process, information and control or performance measurement or rewarding systems can be adapted. And these systems can be seen as global effectiveness of capital budgeting process. Third, variable deals with each investment characteristics.

On the basis of objectives, investments can be divided into; compulsory investments; investment in existing business era; investment in new business era; acquisition and for research and development purposes.

Contingent Approach

In this stage the relationships between exogenous (external) and endogenous (internal) variables examined.

The Identification phase

This stage plays an important and major role and due to this stage the global quality and effectiveness of capital budgeting process can be determined. The complexity of this stage can be determined by a number of contingent variables which includes environmental variables, firm variables and also the investment specific variables. If organizational environment is uncertain then there should be decentralization in its activities. Because in dynamic or uncertain environment it is necessary to involve the lower level of management in the planning process because then this process can be conducted more efficiently.

The Development and Evaluation Phase

In this stage of Capital budgeting process all the external factors influence on capital budgeting process. The selection of evaluation technique depends upon the environmental factors as well as the formal firm's organization has effect on the capital budgeting process.

The Methodological Aspects

When we are talking about the environmental variables it is considered that deterministic and traditional financial techniques of capital budgeting process can be employed effectively only in stable and in foreseeable environments; on the other hand, because sophisticated methods of capital budgeting have flexibility (like Modified DCF Techniques) are mostly used or it is more suited in dynamic or turbulent environments.

In this stage the information systems role becomes very much critical because the investment proposal requires a large amount of data and its development is a complex activity and it is also a long term process. A number of factors determine that which kind of information is required those factors, including: the characteristics of the single project; techniques that are used for evaluation stage. If there is evaluation technique then there must be a user friendly information system that can give information which can help in evaluation. Information systems which are designed to give and support to capital budgeting activities that information system can lead to reduction in costs of developing activities.

The Organizational Aspects

There is need for the structured and appropriate patterns; i.e. a project team can be taken from the other organizations and for completion of that specific project. In general, the choice, role and selection of structure which may suit best depend upon the following external variables: formal organization, Firm and also the investment specific characteristics. In more precise words, some of the organizations are like project structured organizations.

The Selection of Meta-Investment Projects

The Methodological Aspects

In this stage of the selection process the use of analytical techniques is vulnerable by some of the relevant problems, which can be summarized. Projects are not full blown; hence, the amount and the reliability of data are not compatible with the use of quantitative methods. Organization must obtain an accurate quantification of a project's economic value, It is also most important to examine the strategic impact of investment projects By focusing or giving attention to some critical key aspects, the purpose is to analyze the alternatives for making strategic decisions rather than simply selection of projects i.e. the compatibility between the set of proposed meta-investments and corporate strategy; The financial balance resulting from the consolidation of strategic programmers; The availability of non-financial resources; The risk profile of each project, and the global risk position of the company.

The Organizational Aspects

In the first stage of selection process the top level management plays an important a vital role, i.e. in single business or sole proprietor ship firms or dominant business which can also have its diversified firms. In divisional firms, the importance of formal organization emerges once more: hence, in companies adopting a highly decentralized strategic planning process, top management should delegate most activities to divisional management, limiting its activities to the control of global strategy and financial balance.

The Authorization Phase

In some kind of organizations, the authorization phase should constitute a Unicom with the previous selection phase. Two conditions must be met: A low degree of environmental turbulence: otherwise, something may happen, in the time span between the end of the planning process and the start-up of each investment, which could lead to a change in pre established plans. Second target-oriented control/performance measurement system: the authorization process is an opportunity top management can dispose to control capital expenditures.

Top level management must avoid any interference in that type of organizations in which there are high decentralizations. In a lot of cases the authorization process of capital budgeting stage is the only one stage which is not included in the strategic planning process, taking place just before the implementation of each project. There are a lot of purposes of this stage i.e. to check attractiveness of investments, possible changes reflection in the competitive context, up-to-date forecasts, or in macro-economic; and availability of budgeted resources and their verification, since it might be reduced by negative variances of other implemented. Since analytical tools are not relevant in this stage, the analysis will focus on organizational aspects: the fundamental issues consist in identifying who must be involved in the discussion of investment proposals, and who holds final decision power.

There are following external variables that forced a vital influence on the authorization process and this Includes: investment-specific variables; firm's strategy; the strategic planning process adopted by the firm.

Conclusions

The aim of this paper was the development of an integrated model of capital budgeting. The purpose of this paper is to fill the gap by integrating of analysis of all the investments proposals that are in global scheme and also rationalization of capital budgeting process stages; that gap lies between assessment of investment proposals and strategic planning. The result is a contingent model, since the configuration of the process characterized by the best compromise between efficiency and flexibility depends on a number of internal and external factors. By making comparison of contingent model with multinational companies capital budgeting process shows that most of the companies have developed in implicit or in explicit way. It is a simplified scheme, which takes some of the endogenous and exogenous variables into consideration. More precisely the examined companies seem to focus their attention on the analytical tools, while the organizational problems are often disregarded, as it often happens in the literature.

In fact, very accurate and complex procedures for the economic-financial appraisal of proposals exist, but managers are becoming aware that such kind of tools are useless, unless they are put in the wider context of strategic planning and strictly linked to the organizational context.

Only a few companies was an attempt to structure the whole capital budgeting process made; nevertheless, they failed in considering some critical variables (such as the control and the rewarding systems), which influence the behavior of people involved in capital budgeting activities.

The purpose of this paper is also describing the capital budgeting methods that are mostly used in the past years. And also describes that which of the method is gaining popularity day by day. Moreover, in these "evolved" models some of stages have gained much attention of management while other remaining stages have ignored which are also necessary for well organized capital budgeting process. In particular, the phase of authorization is still considered very important by managers, despite some relevant factors as the different importance of proposals, or the management control system adopted, while on the contrary, poor attention is usually given to the phase of identification.

Recommendations

Hence, there is made a lot of efforts by many of the companies for making a well organized capital budgeting process and also for the selection of suitable or sophisticated method for analyzing investment opportunities but there is still required a lot of efforts for making a well organized capital budgeting process and also for method selection, that method and process should be tailored made which can really help the management in operational and also for strategic decisions. If managers of large firms will aware of sophisticated capital budgeting methods and process then they can make rational decision for organization. There is need for training and if decisions are made mutually or decentralization then this purpose can be achieved.

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