FINANCING OF CAPITAL EXPENDITURES: A STUDY OF INDIAN CORPORATE SECTOR

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SUCHETA GAUBA Nee KHANNA

DEPARTMENT OF COMMERCE
DELHI SCHOOL OF ECONOMICS
UNIVERSITY OF DELHI
DELHI-110007

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ABSTRACT

Introduction

The pattern and pace of long-term investment is crucial in the development of every economy. The rate of capital accumulation or business fixed investment is one of the key determinants of economy’s long term growth rate and is indispensable for overall economic development. The role of Indian corporate sector has always been instrumental in this regard. Moreover, the same has become even more significant after the liberalization, privatization and globalization measures post Industrial Policy 1991 in Indian economy. Corporate investment as such contributes towards current demand, current employment and future output. It therefore becomes interesting to study investment at aggregate, industry and firm level. This study confines itself to the consideration of business fixed investment (corporate capital expenditures) at firm level. The primary aim of this study is to analyze the importance of various sources of finance in corporate capital expenditures in India. As the capital expenditures involve huge investment, availability of funds is a prerequisite in undertaking them. The companies usually have access to a wide array of funds for the said purpose but the choice of a particular source depends on a multitude of factors. As no source of finance is an unmixed blessing, the success of capital expenditure depends in a large way upon the sources of finance used for financing the proposal. As capital is one of the important elements to business growth, its efficient use requires acquisition in appropriate amounts at the right time and careful formulation of internal policies concerning the choice of the various sources of finance and the costs thereof. Broadly, the companies have to finance their investments through a mix of shareholders’ equity and liabilities. Both financing and investment decisions involve huge stakes of the companies and also signal future prospects of corporate sector in a better manner. These decisions clearly leave an impact over the universally accepted objective of financial management, i.e., shareholders’ wealth maximization. Hence, there is a need to investigate the issue of financing capital expenditures and the preference in using various sources of finance in Indian context.
This research aims to evaluate empirically the importance of various sources of finance used for the purpose of making capital expenditure decisions in public and private sector in India. The study covers manufacturing industries in both the sectors to draw comprehensive conclusions on this vital issue.

Objectives of the Study

Capital expenditure decisions have significant impact on the long-term performance of the company and the companies require adequate financing for such projects. The primary objective of the study is to examine financing of capital expenditures in Indian corporate sector. Within this objective, an attempt has been made to identify the trends about the frequency and size of capital expenditures. Furthermore, the study aims to understand the significance of various sources of funds for financing long-term investment decisions. The major sources of finance available to the companies include external sources i.e. equity shares and debentures and internal sources (retained earnings). Additionally, the importance of cashflows in firm’s investment decisions and the nature of its relationship with corporate investment have also been explored. Finally, the study scrutinizes if investment (capital expenditure) decisions are dependent on sources of financing.

Research Methodology

Sample Selection - A sample of 176 large sized Indian companies spread across fourteen different industries has been analyzed to test study objectives. These companies have been selected from top 500 companies of India (turnover basis) as per the ET500 list published by Economic Times Group in 2008. Government owned commercial enterprises featuring in ET500 list have been incorporated in the final sample. However, statutory corporations, banking, finance and trading companies have been kept outside the purview of the study. The variables have been adjusted against inflation by Wholesale Price Index.
Data Collection and Compilation – The study aims to examine and accomplish the objectives stated above over a fourteen year period from 1994-95 to 2008-09. The period after liberalization has seen changes in the asset structure of all companies irrespective of industries. The study is based on firm level data which in turn was available in audited financial statements of the sample companies. This has been sourced primarily from a firm-level micro database; PROWESS administered by the Centre for Monitoring Indian Economy. The first year observations were lost while estimating flow variables. The study covers variable specific data of 176 sample companies for fourteen years.

Statistical Tools Used - Frequency and trends of capital expenditure decisions has been analyzed with the help of tabulation of data, use of frequency distribution, and correlation. The trends have been captured by tabulating the major variables used in the study for aggregate as well as industry-wise samples and graphically depicting the same by using line charts. An attempt has been made to study a standard accelerator cum cashflow investment model across Indian corporate sector collectively and across various industry groups separately. In this study, panel data model with balanced dataset has been used for multiple regression. The classical regression (Ordinary Least Squares) results have been estimated using LIMDEP Software, Version 7.0. Regression analysis has been conducted using Lagrange Multiplier test statistic, Hausman Test statistic, and Durbin-Watson test statistic and correlation matrix.

Findings and Conclusion

The present study has tried to study the relationship between capital expenditure (corporate investment) and financing pattern of Indian corporate sector. The major findings of the study have been sub-divided into three categories viz. Trend Analysis, Empirical Findings Related to Aggregate Sample and Empirical Findings Related to Industry Wise Sub-Samples. These findings have been summarized as follows:
Findings Related to Trend Analysis – It has been found that the rate of change in net fixed assets over the study period shows that routine investments are more frequent than growth related investments. There has been a consistent rise in the change in output figures of the sample companies over the study period. Change in output and change in net fixed assets have significant and positive correlation. This variable has been used as a proxy for accelerator for both current and previous year values. A significantly positive correlation amongst of change in net fixed assets with flow of borrowings and operating cashflows indicates the importance of sources of finance for Indian corporate sector. A rhythmic trend has been observed between change in net fixed assets and trade credit due to high correlation. A positive but statistically insignificant relationship has been found amongst change in net fixed assets and change in inventory. It is interesting to note that flow of equity has been positive for maximum part of the study however, the quantum of funds raised through equity has been much less than other sources of finance.

Empirical Findings Related to Aggregate Sample – Under this portion of the empirical analysis, an effort has been made to empirically examine the financing of capital expenditures for the entire sample. The results have been robust and majorly in line with the pre-established hypothesis. Accelerator theory of investment plays a determining role in firm’s fixed investment behavior as both change in output in the current year and the previous year have been statistically significant. The coefficient of change in net fixed assets in the previous year has not been found significant which in turn indicates that investments in fixed assets are not dynamically related to the level of investment in the previous period. As hypothesized, change in inventory has been found as negatively significant suggesting a substitution relationship between fixed and inventory investment. Further, the results confirm a highly significant and positive relation of trade credit with change in net fixed assets as postulated. Cashflow from operating activities used as a proxy for internal funds in the study has been found to be highly significant with a positive coefficient lending support to the theoretical belief that internally generated surplus funds play a noteworthy role in influencing the level of investment in net fixed assets. Both the external sources of finance viz. flow of equity and flow of borrowings
have been positively significant in defining investment behavior of the sample companies. As postulated, U-shaped relationship between investment and cashflow has been reinstated by empirical findings.

**Empirical Findings Related to Industry-Wise Sample** - The major trends observed in various industry groups suggest that accelerator theory has gathered strong support with a positive and significant relationship between change in net fixed assets and change in output in ten industry groups. As far as the various sources of finance are concerned, both flow of borrowings and operating cashflows have been heavily raised and employed by various industry groups and better results about preferred source of finance has been analyzed with panel data results. Moreover, flow of equity has been highly positively correlated to change in net fixed assets in only minerals, and rubber and plastic products industry only. Trade credit along with change in output has been highly and positively correlated to the dependent variable in majority of industry groups. Flow of Borrowings appears to be more important variable as compared to other sources of finance across most of the industry groups. Additionally, empirical evidence for U-shaped relationship between investment and cashflow has been tested for all the industries and has been found to exist in chemicals, food products, machinery and minerals industry.

**Conclusion** – The most important conclusion which is revealed through the analysis is that sources of finance play a significant role in capital expenditure planning of Indian corporate sector. All the four variables representing financing in the investment equation viz. cashflow from operating activities (proxy for internal funds), flow of equity and borrowings (external funds) and trade credit (short term funds) have been significant as per panel data results.

**Suggestions and Recommendations**

Overall, the study contributes to the investment and financing literature by stressing on the significance of financing in investment decisions. Additionally, the sensitivity of investment to cashflows has strengthened the signaling effect of cashflows. The status of
cashflows may be used by investors not only as an indicator of future prospects but also a firm’s plan to indulge in fresh capital expenditures. The role of trade credit in defining investment behavior of the companies has been a highlight of the study. Finance managers, students and researchers can analyze this relationship and work towards better management of this variable keeping in mind its relative importance. The study will be found useful from various dimensions, both academic and practical, in terms of its relevance to the Indian corporate sector. As the study covers the period after liberalization, it will provide a reference ground for finance managers and other top management executives in making choices between various sources of finance for various investment proposals. Moreover, the results pertaining to U-shaped relationship of investment and cashflows have enriched the available literature on this topic by providing results from a developing economy sample. The findings will be relevant to the private corporate sector in general for their investment portfolio decisions.