

CHAPTER VIII

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8.1.1. The trends in fixed investment of joint stock companies have been studied in two different parts. The first part of the study deals with a review of theoretical literature on fixed investments. The second part contains empirical analysis of the data collected. Major findings of both the parts are summarised below.

FIXED INVESTMENT DECISION

8.2.1. The review of literature has been divided into three sections : fixed investment decision, financing fixed investments and funds flow analysis. The first sections deals with theories of fixed investment decisions. Investment decisions on fixed assets differ considerably from those on current assets. They have a larger cash cycle than the current assets. Further, current assets decisions can be changed easily, whereas fixed investment decisions cannot be easily reversed during the life time of the asset. Fixed investment decisions help installation of capacity and current assets the utilisation of that capacity. The most common forms of fixed investment are : replacement and maintainance investments, expansion investments, renovation, modernization and diversification investments. These investments can be broadly divided into two categories, the routine investments for replacement and maintenance and investments for growth and expansion.

The first category of investments are meant for maintaining the existing production capacity. While the second category of investments are meant for expansion and growth by installing capacity. However, for each type of fixed investment decision a large number of factors are to be taken into consideration. Primary objective of all these factors is to maximise the return to the firm.

8.2.2. Fixed investment decision imposes another vital problem of deciding among the alternative proposals. Different methods like pay back, accounting rate of return, internal rate of return and net present value, are being used for evaluating these proposals. The last two methods are considered to be scientific as they use the sophisticated discounted cash flow technique for evaluation. However, this technique poses a large number of practical difficulties. The payback method of evaluation is understood by all and practiced by many. While using the methods and reaching decisions, the most suitable criteria to be followed are: bigger benefits are preferable to smaller ones, and early benefits are preferable to later benefits. Where several capital requests have been made by various sections of the company and where only few of these can be accepted because of lack of immediate funds, the company has to adopt the principle of capital rationing.

8.2.3. Beside the different methods which are theoretically important for fixed investment decisions, there are

many other qualitative considerations which influence the decision in practice. These factors are, the government's industrial and financial policy, corporate tax planning, availability of investible funds, etc. Depreciation charge is one of the important internal factor having considerable impact on the fixed investment decision, both because of corporate tax planning and as source of financing.

FINANCING FIXED INVESTMENTS

8.3.1. Different sources from which fixed investments are financed have been divided into two broad categories. They are the internal sources and external sources. The internal sources of financing include depreciation charges and retained earnings. The external sources include equity capital, long term debt, creditors and current borrowings. Fixed investments for the existing product lines, and routine replacements and maintenance could conveniently be financed through internal sources. Fixed investments for new products and acquisition of production capacity would need more funds and therefore also need finance from external sources. However, companies have to finance the fixed investments with a combination of different sources of funds keeping the optimal capital structure of the company in view.

8.3.2. Optimal capital structure is determined by striking a balance between the cost of capital and risk involvement

of different methods of financing. Internal source of financing is easily available for investment, but its cost is comparatively high. Whereas long term debt, being the cheapest source of financing, enhances the risk involvement and reduces the liquidity of the firm. So financing decision depends on the cost of financing, which is measured as the weighted average cost of capital of the firm. Further, the risk involvement of the sources of financing should maintain the level of risk of the firm intact. The fixed investment financing of a company also depends on the corporate taxation, dividend policy and the mode of financing its current assets.

FUNDS FLOW ANALYSIS

8.4.1. Management decision regarding fixed investments and their financing, with the object of maintaining profitability and liquidity needs appraisal. This appraisal can be possible by the careful analysis of the financial statements. The funds flow analysis is found to be most appropriate to find out the trend and more complete and useful analysis of financial events. The most common method of preparing the funds flow statement starts from the changes of balance sheet items of two different dates. However, the statement of balance sheet changes does not provide a complete picture of the major funds flow. Three major refinements in the changes of retained earnings, net income

and fixed assets acquisition are to be made by the analyst to make the statement more useful. Separate formats for funds flow statements have to be designed by each analyst to suit his need.

TRENDS IN FIXED INVESTMENT

8.5.1. For the total sample taken together the overall trend in fixed investments of joint stock companies shows an increasing trend during the period of the study. It constitutes periods of growth and routine investments. Periods of growth have been concentrated in the earlier and latter years of the study. The middle period represents more of routine investments. Thus, for the entire period, the trend represents statistically a U-shaped curve.

8.5.2. The first phase of growth is between 1960-61 to 1963-64. The year 1963-64 is having the highest investment with 36% of growth. But in this year, only 20% of the sample companies had growth investments whereas all others had routine investments. Further, out of these 20% companies, only 7% of the sample and 68% of the total investments of that year. Besides this period, the other years of growth are between 1970-71 to 1972-73. This period is found to be more uniform and stable than the other years. During this period 67% of the sample companies had growth investments. Out of this, 33% of the companies had growth investments in all the three years. Thus, from this analysis we can conclude

that the period between 1970-71 to 1972-73 is found to be more marked for growth and expansion of fixed investments than the other years of the study.

8.5.3. The factors influencing the fixed investment trend have been divided into two broad categories. They are the internal factors and external factors. The internal factors being sales volumes, earnings and depreciation charges. The external factors are tax planning, government policies and availability of investible funds. The influence of each factor in the fixed investment trend of the State has been analysed.

8.5.4. In such analysis, the coefficient of correlation between incremental fixed investment and sales volume is found to be + 0.29. This is statistically insignificant, suggesting poor association between the two variables. This poor association is due to the difference in the basic character of the two variables. First of all fixed investments do not grow regularly like sales. Further, more growth of fixed investments cannot increase sales volume of a company. The sales volume depends upon availability of raw materials, adequate supply of energy, industrial harmony, increase in production, efficiency of sales promotion activities and market demand. It may happen that the sales may increase due to the increase in price though the volume of

sales remains constant. Hence, the two variables do not have a close and direct relationship with each other.

8.5.5. In a similar analysis we found the association between incremental fixed investments and earnings also to be poor. The coefficient of correlation between these two variables is +0.22. The poor association is mainly due to the fact that, earnings do not depend upon fixed investments. Fixed investment process is a long range investment planning for acquisition of capacity. Whereas earnings of profit is a mechanism of efficient capacity utilisation, sales and conversion of current assets into cash. It also depends upon the depreciation policy and adoption of cost control techniques. In such an event mere growth of fixed investments cannot assure increase in the earnings of a company. So, here again the relationship between two variables is not found to be directly significant.

8.5.6. The association between the two variables: incremental fixed investments and depreciation charges is found to be relatively high. The coefficient of correlation between these two variables is +0.49. This is statistically significant at 5% level of significance. The higher degree of association between the two variables suggests that, increase in fixed investments ultimately increases the depreciation charges. On the other hand, increase in accumulated depreciation charges help the company for further investments

in fixed assets. In general, the fixed assets are financed by funds generated internally. Depreciation charges constitute a major part of this internal source of funds. This analysis suggests the high degree of interrelationship between these two variables.

8.5.7. Another significant observation being the high degree, of association between sales, profits and depreciation charges. The coefficient of correlation between sales and profits is + 0.95, sales and depreciation is + 0.97, and between profits and depreciation is + 0.87. This high degree of positive association between the three variables suggests that the change in one variable also changes the other two almost in equal degrees. In practice, increase in sales results in increase of profit. Increase in profit goes along with higher depreciation charges. However, there is a time lag between the change in the variables. Sales, profits and depreciation charges change simultaneously and more frequently. Fixed investments change only discontinuously and in big leaps. In view of this difference in characteristics, the first three variables are highly correlated with each other, while the fourth variables has poor association with the other variables.

8.5.8. Besides the internal factors, a number of external factors also influence the trend in fixed investments. One such external factor being the government's financial and

industrial policy. The Government of Orissa, in its programme for industrialisation during Fourth Five Year Plan invited the private sector industries to invest an amount of ₹. 63 crores during 1969-70 to 1973-74. This investment was aimed at raising the per capital income of the State to the national average and creation of additional employment opportunities. In response to this industrial policy of the Government, companies in the private sector made additional investments to the extent of ₹. 41.26 crores during the period. This amount was about 44% of the total investment made during the entire period of study. Our study indicates that the fixed investment trend has been very much influenced by Government's policy.

8.5.9. The second external factor is the corporate tax planning done by companies to minimise tax liability. The volume of earnings of the companies increased during 1969-70 to 1971-72. This increasing the tax liabilities of the companies. In order to have a better tax planning, the companies invested funds in fixed assets. During this period more than 70% of the growth investments are financed through internal funds. These investments helped the companies in getting maximum tax relief in the form of depreciation charges. Furthermore, this has benefited the companies, in the acquisition of capacity at a comparatively less cost in earlier years than the subsequent years in which they might have been put into use. This is because of inflation. During the period of

study, for seven years there are growth investments for the total sample. In the process of companywise analysis, we found seven companies having more than 5 years of growth investments during the period. This frequent investment in fixed assets is quite an unusual phenomenon according to the theories of fixed investment. Thus, it can be concluded that, fixed investments are made by the companies more frequently as a part of their tax planning than actual need for the assets.

8.5.10. The third external factor is the availability of investible funds. Fixed investments for growth and expansion are generally financed by funds raised externally. Long term debt has been found to be the cheapest source of external funds. So companies try to raise long debts for financing their growth investments. Even at times they postpone the fixed investment programme in case debts are not forthcoming. Sometimes, if they get the assurance for such a long term debt in near future, they invest short term funds for fixed investments as a stop-gap arrangement. In our analysis, we find, that the I.D.B.I. and other term lending institutions extended their helping hand to the companies in Orissa during 1969-70 to 1973-74 in a big way. The I.D.B.I. sanctioned an amount of Rs. 380 lakhs and disbursed Rs. 238.7 lakhs during 1964 to 1969 to different projects of the state. Whereas it sanctioned Rs. 1860.5 lakhs and disbursed Rs. 960.8 lakhs during 1969 to 1975.

Further the other term lending institutions of the country sanctioned Rs. 2020 lakhs and disbursed Rs. 1364 loans to different industrial projects of the State during the same period. This large scale availability of long term debts to industries of the State had considerable impact on the investment in fixed assets.

8.5.11. The poor association between incremental fixed investments and the internal factors, suggests that the trend in fixed investments has been influenced more by the external factors. The above analysis indicates that the growth in fixed investments during 1970-71 to 1972-73 has been heavily influenced by the external factors like government's policy, tax planning and availability of investible funds.

FINANCING TREND

8.5.1. A greater proportion of the additional fixed investments has been financed by funds generated internally. During the period of routine investments for 4 years more than 70% and for 3 years more than 30% of the investments have been financed internally. Even during the period of growth, internal funds have played a major role. During this period, for 2 years more than 50% and for 3 years more than 30% of the investments have been financed through internal funds. This analysis suggests that internal sources of funds contributed the major share of financing additional

fixed investments. However, it has played a greater role during the years of routine investments. Further the use of internal funds is found to be more significant during the later years of the study. This is because the volume of earnings has considerably increased during this period.

8.6.2. The next important source of financing is the long term debts. During the period of growth, for 3 years more than 45% and for 2 years more than 25% of the investments were financed through long term debts. But during the period of routine investments the proportion of long term debts is found to be quite insignificant. The proportion of long term debts to the incremental investments varied between 10.08 to 71.96 per cent during the growth years and between 6.81 to 30.45 per cent during the routine investment years. From this analysis we observe that during the period of growth, companies utilised more long term debts, along with internal funds, to finance investments. Further, we find the use of long term debts mostly during the early years of the study. This is mainly due to the low rate of earnings generated by the companies during this period, and initial investments made by two large companies.

8.6.3. New equity capital as a source of financing is

found to be declining. During the first three years of the study, we find the share of new equity capital varied between 20 to 14 per cent of the investment. But thereafter it started declining for the rest of the period. During the first three years, again, two of the new companies raised their initial capital issues. The facts and analysis suggest that further issues of equity capital were not considered suitable by the companies for financing additional investments.

8.6.4. Companies also utilised short term funds for financing additional fixed investments. During the study, for 5 years of growth investments and for 5 years of routine investments, more than 10% of the additional investments were financed by short term funds. Further, during the routine investments for 3 years more than 25 per cent of the investments were financed through short term sources. This analysis indicates that companies utilised short term funds both for growth investments as well as for routine investments. This trend of financing fixed investments suggests that the companies could raise short term bank borrowings more easily compared to long term funds. This practice of continuous use of short term funds for financing fixed investments must have affected the working capital position of the companies adversely. Further, the liquidity of the firms and the short term borrowing capacity from the banks must have been considerably reduced.

8.6.5. Thus, the trends in financing fixed investments show the importance of internal sources of funds for financing routine investments. The growth investments of the earlier years have been financed mostly by long term debts, while the latter years by internal funds. The importance of short term sources of financing both during growth as well as routine investments is quite significant. This suggests easy availability of short term bank borrowings for financing additional fixed investments.

COMPANYWISE ANALYSIS

8.7.1. In the companywise analysis we find that, 6 companies have the fixed investment trends as U-shaped, 2 companies each as L-shaped and J-shaped, 3 companies as bell (\cap) shaped and two companies showing no trend at all. The first trend indicates growth investments at two periods during the earlier years and latter years of the study, which is similar to that of the general trend. Whereas the other three trends indicate single growth periods during earlier years, latter years and middle years of the study respectively. There are 9 companies having average annual investments less than the total sample average. From these, 4 companies are small companies and 4 companies are medium sized companies. 3 companies have average investments quite nearer to the total sample average. Whereas the rest 3 companies have average investments more than the total sample average. Of these

6 companies, 4 are large companies and 2 are giant sized companies. Thus, the large and giant companies have greater influence on the total sample average, than the small and medium companies.

8.7.2. The coefficient of correlation between sales and incremental fixed investments is found to be statistically significant in case of 3 companies, where as it is ~~insigni-~~ insignificant or negative for 12 companies. Statistically a significant coefficient of correlation between profits and incremental fixed investments is observed in case of 2 companies, and insignificant or negative in case of 17 companies. But the coefficients of correlation between depreciation charges and additional fixed investment of 10 companies are found to be statistically significant, where it is insignificant or negative for 5 companies. Thus, we can conclude that the two internal factors sales and profits do not have much influence on the fixed investment trends of individual companies. Whereas depreciation charges have considerable influence on the fixed investment trend of the companies like the general trend.

8.7.3. Funds from internal sources were utilized by 14 companies for financing a major part of their routine investments. Whereas only 5 companies used the same for growth investments. Long term debts were used by 11 companies for financing growth investments, whereas only 3 companies used the same for routine investments. Only 3

companies raised funds from equity issue for financing additional investments for more than 4 years. Of these 2 companies raised their initial capital during the period. Short term funds were used by 10 companies for financing growth investments, whereas 6 companies used this fund for routine investments. Thus the trends, in financing the additional fixed investments by the first three sources internal funds, long term debts and equity issues are quite in line with the general trend. While the use of short term funds is found to be different from the general trend of the total sample.

TESTING OF THE HYPOTHESES

8.8.1. As stated earlier in Chapter V, we have examined the following hypotheses in this study :

- (1) Fixed investments of routine nature for maintenance and replacements are made continuously and on regular basis.

This hypotheses was examined both for the total sample analysis as well as for individual companies, using funds flow analysis technique. In the process we found that, out of 14 years of the study, for 7 years there were routine investments for the total sample. All these years are found to be continuous during the middle period of the study. In the case of companywise analysis, we find 73%

of the companies had routine investments for more than 7 years and that too continuously. Thus, this analysis finds the hypotheses valid for the total sample as well as for the individual companies.

(2) Growth and expansion investments are made only in big leaps or discontinuously.

This hypotheses is again examined at both the stages of analysis with the help of funds flow analysis technique. Here again, we find 7 years of growth investments for the total sample. But these investments are not continuous but distributed during the earlier years and latter years of the study, with a gap of 6 years. In the companywise analysis, we find, 67% of the companies have 4 years of growth investment and 40% of companies have 5 years of growth investments during 14 years of the study. Again 6 companies have two growth periods and 7 companies have only one growth period during the study. Thus, this analysis finds the hypotheses valid, both for the total sample analysis and individual company analysis.

(3) Internal factors have considerable influence on the fixed investment trend of companies.

This hypotheses was examined with the help of correlation analysis between incremental fixed investments

and the internal factors, sales and profits. The coefficient of correlation between incremental fixed investments and sales and between fixed investments and profits for the total sample are found to be + 0.29 and + 0.22 respectively. Both are statistically insignificant. In the companywise analysis we observe that, these coefficients are not significant in case of 12 and 14 companies respectively. Thus, the hypothesis is not valid as regards sales and profits as internal factors both for the total sample as well as for the companywise analysis.

(4) Depreciation charges and investments in fixed assets influence each other to a very great extent.

This hypothesis is again examined with the help of correlation analysis between incremental fixed investments and depreciation charges. In the total sample analysis, we find the coefficient of correlation between the two variable is + 0.49, which is statistically significant. In case of companywise analysis also we find the coefficients significant in case of 10 companies. Thus, the hypothesis is valid both for the total sample and for individual companies also.

(5) Fixed investment trend is not affected by the external factors.

This hypothesis was examined by using information from the Director's reports of the sample companies and other contemporary government¹ and institutional records. On examination of these reports, we find that the external factors like governmental industrial policy, corporate tax planning and availability of investible funds have considerable influence on the fixed investment trends of the companies. Thus, the hypothesis is not valid for the study.

(6) Internal sources of funds are generally used for financial routine investments while growth investments are generally financed by external sources of funds.

This hypothesis was examined with the help of funds flow analysis technique. In the total sample analysis we find that a greater proportion (more than 70%) of the routine investments are financed by internal sources. The companywise analysis also shows that 8 companies have financed 8 years of their routine investments entirely through internal funds. The growth investments, on the other hand, are financed mostly (more than 50%) through long term debts. In the companywise analysis we find that 11 companies have used long term debts and other external sources of financing for their growth investments. Thus, this hypothesis is valid so far as financing of routine

investments through internal sources and growth investments through external funds for total sample as well as for individual companies.

(7) Short term financing is generally used for financing fixed investments only during growth periods and that too for short periods.

This hypothesis was also examined with the help of funds flow analysis technique. In the total sample analysis, we find that both during the routine and growth investments short term funds have been used. Some times the proportion of this fund exceeded 25% of the investment in a year. This means long term fixed investments have been financed from short term sources of funds, i.e., bank credit taken for the financing of working capital and creditors and provisions for current liabilities. It has also been observed that this source has been used continuously during the entire period of the study. However, in the case of companywise analysis we find, that 9 companies used this source during growth periods and only 5 companies used it during the routine investments. Thus, this analysis finds the hypotheses invalid for the total sample analysis but valid for many individual companies.