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CORPORATE INVESTMENT IN 1980:  
A FORECAST

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## ABSTRACT

An attempt is made in this paper to forecast the growth in private corporate investment in 1980. Corporate investment is taken to include gross capital expenditures of all companies including joint sector companies. This study also provides a picture of the level and composition of corporate investment in 1979.

The methodology used in the study to forecast corporate investment relies on the data available with the term lending institutions on the phasing of capital expenditures of projects sanctioned by them. Since most of the projects in the corporate sector approach one or the other of the all-India term lending institutions for obtaining financial assistance, the study based on the projects sanctioned by them should be a reliable reflection of the behaviour of the entire sector.

Capital expenditures on projects sanctioned by term lending institutions amounted to Rs.1100 crores in 1979. This shows a marginal rise over the level attained in 1978. However in real terms, there was no rise. Based on the projects sanctioned until the end of 1979, the capital expenditure by the corporate sector in 1980 will be Rs.1038 crores. Taking in to account the expenditures that will be made out of the projects to be sanctioned in 1980 itself and making some adjustments for the phasing of the capital expenditures on the basis of past experiences, it can be concluded that corporate investment in 1980 will in nominal terms rise over the level achieved in 1979 by 8 per cent. But in real terms once again there will be no increase.

## CORPORATE INVESTMENT IN 1980 : A FORECAST

. Rangarajan

An attempt is made in this paper to forecast the growth in private corporate investment in 1980. Corporate investment is taken to include gross capital expenditures of all companies including joint sector companies. This study also provides a picture of the level and composition of corporate investment in 1979.

### FORECASTING TECHNIQUE

In developed countries it is a standard procedure to forecast corporate investment through the use of anticipatory data. Such anticipatory data are collected primarily through surveys of investment intentions. Both Governmental and non-governmental agencies undertake such surveys.

The methodology used in this paper to forecast corporate investment relies on the data available with the term lending institutions on the phasing of capital expenditures of projects sanctioned by them. The details of the technique followed have been explained by the author in his earlier writings.<sup>1</sup>

It has been observed that most projects in the corporate sector approach one or other of the all-India term lending institutions for obtaining financial assistance. The companies provide the lending institutions with data not only on the total cost of the project but also the capital expenditures (project as well as normal) to be incurred in the various years. These information form part of the cash flow statements attached to the proposals. By aggregating the

information on the phasing of capital expenditures of proposals sanctioned in all the previous years, it should be possible to forecast capital expenditures for any year. The scope of the study is strictly restricted to the enterprises which have taken assistance from the term lending institutions. Thus, the estimates arrived at do not cover the entire corporate sector. Nevertheless, since most of the companies come to the financial institutions for assistance, this estimate can be regarded as a reliable reflection of the behaviour of the entire corporate sector. What is relevant from the point of the corporate sector as a whole is the trend revealed in the rate of change.

The estimate that are derived approximate more closely to the gross fixed asset formation than to net fixed asset formation. In the case of new companies there is no difference between gross and net fixed assets. But with respect to old companies, the cash flow statements provided to the financing institutions relate to the entire company. Therefore, as mentioned previously, we take down not only the capital expenditures to be incurred on projects but also the normal capital expenditures which are shown in the cash flow statements. In the last few years we have taken extra care to collect data on both types of capital expenditures. But we have faced some difficulties in this regard. There are some companies which have not provided data on normal capital expenditures. In the case of certain types of loans such as those for balancing equipment, detailed data are not usually provided.

## LIMITATIONS OF THE APPROACH

A limitation of this method of forecasting is that part of the expenditures to be incurred in any year comes out of projects sanctioned in that very year itself and we have no information on this. The proportion of such expenditures has varied from year to year. In 1973, 1974 and 1976 the ratio was around 30 per cent. There was a sharp jump in the ratio to 45 per cent in 1977 which may perhaps be accounted for by the introduction of new schemes such as soft loan schemes and technical development fund schemes. Expenditures on projects coming under such schemes may not have much lag. This ratio dropped to 28 per cent in 1978. It rose again to 35 per cent in 1979. Thus a part of the capital expenditures to be incurred in a year will largely depend upon the factors that operate within that year and these can not be forecast by our model. While the pending applications with the term lending institutions can give some clue, they do not provide a fully satisfactory indicator. However, this method at least indicates the minimum investment that will be made. Also it indicates the expenditures that will have to be forthcoming out of the investment decisions of the forecast year in order to show a rise.

The other limitations of this model of forecasting have been pointed out by the author in his earlier writings. The validity of the estimates depends upon how closely companies adhere to the

expenditure pattern outlined in the initial project proposal. Cost over-run of projects by itself is not a limitation. So long as companies seek assistance from the term lending institutions for financing the cost over-run, they would get incorporated in our estimates. In the case of such projects necessary adjustments are made in the phasing of capital expenditures in the light of the new information. Obviously over-runs which are financed by companies out of their own resources will not be captured in our estimates. However, the crux of the problem is how closely even under normal circumstances companies stick to their original phasing of capital expenditures. We had reported earlier the results obtained from an analysis of 44 projects done by us comparing the original and the actual phasing of capital expenditures. It is difficult to draw any generalisations from this study. The one factor that emerges is that in the case of expenditures to be incurred in the year of sanction, planned expenditures are always higher than the actuals. It appears that normally projects provide for about 20 per cent of the cost of the projects to be incurred in the year of sanction. But the actuals are much closer to 10 per cent. There is evidence to believe that the original and the actual phasing of capital expenditures are much closer for existing companies than for new companies. To some extent differences are also accounted for by the nature of the industries. Actual expenditures will perhaps be close to the planned ones in the case of loans granted

under such schemes like soft loan schemes and technical development funds. The composition of the projects in terms of old and new companies, types of industries and types of loans vary from year to year. There is no general formula by which one can modify the original phasing of capital expenditures. We have to be content with making changes in the original phasing of capital expenditures as and when new information are made available to the financing institutions. However, some judgement will have to be exercised taking this disparity in to account while making forecasts.

#### PAST FORECASTS

Forecasts of corporate investment using this model have been made in the past several years. However, one is naturally tempted to ask how far these forecasts compare with actuals. It is rather unfortunate that we do not have a series on corporate fixed investment which is reliable and acceptable to all. At present estimates are provided by the CSC, the Economic Times and to some extent by the Reserve Bank of India. Individual researchers have also constructed such series. An analysis of these series prepared by the various agencies and persons shows that they differ from one another not only in absolute amount but also in terms of relative changes for several years. There are years in which even the direction of change is different for the different estimates. Though all the estimating agencies use the method of blowing-up the figure obtained from a sample survey of companies, differences seem to arise because of a lack of reliable data on the total paidup capital of all companies industrywise.



For 1972-73, 1973-74 and 1974-75 the Economic Times estimates of gross fixed assets formation of the corporate sector show a rise of 42.4 per cent, 6.5 per cent and 32.8 per cent respectively. The corresponding rates of growth according to the CSO estimates which include cooperatives also are 31.4 per cent, 7.3 per cent and 16.4 per cent respectively. Our final estimates show a rise of 45.3 per cent, 14.7 per cent and 28.5 per cent respectively. The substantial increase in gross fixed investment at least in nominal terms witnessed in 1972-73 and 1974-75 were captured by our forecast. For 1975-76 our forecast showed a fall whereas all other estimates showed a rise. We are planning to reexamine the data collected for 1975 to find out if there are any errors in the data collected for 1975. The Reserve Bank of India have not yet supplied data on the sample of medium and large public limited companies after 1975-76. The only data now available relate to 450 large companies. These data indicate that in 1977-78 gross fixed assets of the large companies increased by 25 per cent. Our estimate show a much larger rise in 1977. The Economics Times series however show that the rise in 1977-78 over the previous year was very small.

#### PICTURE FOR 1979

From the data provided in Table 1, it can be noticed that the capital expenditures in 1979 will be Rs.1103 crores as against Rs.1068 crores for 1978. Adding to the 1979 figures, some expenditures that will be known only when the 1980 projects are analysed, the nominal capital expenditures in 1979 might have risen by about 8 per cent over the 1978 level. Even this may be an optimistic estimate since approximately 35 per cent of the total cost of the projects sanctioned in 1979 are to be spent in 1979 itself. Scaling this figure down a little, it could be concluded that

in nominal terms the investment in 1979 has perhaps risen by 3 to 4 per cent over the 1978 level.

All the capital expenditures indicated are in current prices. The cost estimates of projects sanctioned in any year would be at the price level of that year. Thus, while aggregating the estimates of projects sanctioned in the previous years, there is need to reduce all the figures to a common price level. We have deflated all the elements in the columns by the combined price index of Electrical machinery, Non-electrical machinery and Transport equipment with 1960-61 as 100. It is seen that in 1960-61 prices the total capital expenditures for 1975, 1976, 1977, 1978 and 1979 would be Rs.244 crores, Rs.292 crores, Rs.403 crores, Rs.410 crores and Rs.404 crores respectively. The total capital expenditures for 1979 in real terms does not show a rise over the level achieved in 1978.

The estimates provided are based on projects approved by the all-India institutions. There are cases where the financing of projects even in the corporate sector is done by the state level lending institutions. While detailed data from each state level institution would be difficult to collect, we looked at the refinancing done by the IDBI to get some indication of the cost of the projects financed by state level institutions exclusively. During the year 1979, we found that the total cost of the projects refinanced by the IDBI for the northern, western, eastern and southern regions were Rs.38.55 crores, Rs.69.40 crores, Rs.22.51 crores and Rs.54.13 crores respectively.

The total of all regions came to Rs.185 crores. It is however difficult to apportion this cost among the various years because detailed cash flow statements are not readily available and also for the reason that by the time the applications come to IDBI for refinancing, the projects have already been initiated with the help of funds provided by the state level institutions. But these figures nevertheless provide an indication of the total amount of investment activity that is going on. It must also be noted that there are other facilities such as bills rediscounting schemes of IDBI which finances capital expenditures. The total amount disbursed by IDBI during 1978-79 to non-public sector units under the scheme of rediscounting of bills was Rs.115 crores.

#### PATTERN OF CAPITAL EXPENDITURES IN 1979

Table 2 provides an industrywise break-up of the capital expenditures incurred in 1979. 'Textiles' top the list with 18 per cent of the total capital expenditures. Next in the order of importance come 'Chemicals and Fertilizers (including fertilizers and pesticides)' with 17.4 per cent, 'Minerals and Metals' with 13.1 per cent and 'Electrical' with 12.2 per cent. 'Textiles' have continued to account for a sizeable part of the capital expenditures for the last several years. 'Paper' which had a share of 14 per cent of the capital expenditures in 1978, accounted for only 6 per cent in 1979. The share of 'Cement' seems to have remained constant at about 9 per cent of the total capital expenditures. Both 'Electrical' and 'Minerals and Metals' have shown a rise over the previous year.

Table 3 indicates an industrywise analysis of the projects sanctioned in 1979. This Table provides important information in as much as it indicates

the sectors in which new investment is occurring. In 1979 the total cost of all the projects sanctioned came to Rs.1181 crores compared with the total cost of Rs.1100 crores in 1978. Of the total expenditures of Rs.1181 crores, approximately Rs.625 crores are accounted for by 18 projects. In fact, the over run in relation to one fertilizer project constitutes a significant part of this total. During the year, the cost of the joint sector projects was Rs.308 crores. The joint sector projects which amounted to eighteen were spread over a variety of industries including Paper, Sponge Iron, Cement and Fertilizers. Soft loan schemes for 76 projects accounted for Rs.241 crores.

There is also a marked change in the composition of industries assisted in the current year as compared with the previous year. During 1978, the sector 'Electricity, Gas and Steam' accounted for 28 per cent of the total cost of the projects. Next came 'Metal and Metal Products' with 22 per cent. 'Textiles' accounted for 19 per cent and Cement 8 per cent. During 1979, the biggest share went to 'Fertilizers and Pesticides'. They account for 23 per cent of the total cost. Next in importance comes 'Textiles' accounting for 16 per cent of the total cost. 'Cement' 'Chemicals' and 'Metal and Metal Products' have more or less equal importance with each of them accounting for 11 per cent of the total.

It is interesting to note that the total cost of the projects sanctioned in 1977, 1978 and 1979 were Rs.1128 crores, Rs.1100 crores, and Rs.1181 crores respectively. These are in nominal terms. The total cost of the projects approved by the lending institutions appears to have reached a plateau. Year-wise corporate investment can still change because of the composition of the projects and the differences in the phasing of capital expenditures. However over a long period it implies a more or less constant level of investment from year to year.

## FORECAST FOR 1980

As of now based on the projects sanctioned until the end of 1979, the capital expenditures in 1980 will be Rs.1038 crores. To this we will have to add the capital expenditures that will be made out of projects sanctioned in 1980 itself. This can be around Rs.300 crores. If we add this amount to the figure of Rs.1038 crores, the corporate investment in 1980 may show almost a rise of 20 per cent over the level achieved in 1979. This however will not be a right conclusion to draw even though the raw data indicate such a change. The time phasing of the capital expenditures, indicates that of the cost of Rs.1100 crores for all the projects sanctioned in 1979, Rs.547 crores are to be spent in 1980. This is approximately 50 per cent of the total expenditures, which is unreasonably high even though in some of the sectors bulk of the new sanctions has been either for over-run or for expansion. Our past analysis of the phasing of the capital expenditures indicates that such large expenditures in a year even if expected do not materialise. If we scale down the contemplated expenditures for 1980 out of projects sanctioned in 1979 to a level which is normal, we will arrive at the conclusion that capital expenditures in 1980 by the corporate sector in nominal terms will be 8 per cent above the level achieved in 1979. In real terms, there may not be a rise in investment in 1980.

NOTES

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TABLE 1  
PHASING OF CAPITAL EXPENDITURES ON PROJECTS SANCTIONED BY TERM LENDING INSTITUTIONS

Year of sanction	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
1962	26										
1963	63	53	40	30							
1964	153	79	47	28	12	2					
1965	449	203	184	135	21						
1966	2397	1127	623	397	359	151					
1967	4377	2041	424	308	190	138	23	3	12		
1968	6655	4219	2768	1711	178	110	53	5			
1969	14168	7859	6213	2172	445	164	54	12			
1970	4545	7817	6704	2193	647	403	176	332	315		
1971	766	7600	10990	9062	4487	854	396	260	260	238	
1972		762	15288	17531	11775	4036	977	397	283	229	
1973			2652	15622	26183	11053	5167	4046	1003	836	
1974		95	361	3889	19832	20413	14411	2193	1245		
1975				17	4016	11423	23122	21535	11854	5200	879
1976						4248	19462	23144	13028	1725	701
1977							6399	44666	45901	23665	8040
1978							326	5942	28052	43222	32150
1979									4849	35240	62127
TOTAL	34048	31844	46294	53095	68148	52995	70566	102495	106802	110355	103897

TABLE 2

INDUSTRYWISE CAPITAL EXPENDITURE FOR 1978 AND 1979 AND EXPECTED  
CAPITAL EXPENDITURE FOR 1980.

Sr.No.	Industry	(Rupees in lakhs)		
		1978	1979	1980
1.	Chemicals and Pharmaceu- ticals	19410 (18.19)	19330 (17.43)	23836 (23.22)
2.	Electrical	9554 (8.95)	13590 (12.25)	19561 (19.45)
3.	Engineering	3325 (3.11)	2807 (2.53)	3583 (3.49)
4.	Jute	1493 (1.40)	2050 (1.85)	1305 (1.27)
5.	Minerals & Metals	12554 (11.76)	14481 (13.05)	15138 (14.75)
6.	Paper	14663 (13.74)	7078 (6.38)	3248 (3.16)
7.	Textiles	14082 (13.20)	20119 (18.14)	12415 (12.10)
8.	Transport	7394 (6.93)	5150 (4.64)	7994 (7.79)
9.	Cement	10048 (9.42)	9840 (8.87)	9381 (9.14)
10.	Miscellaneous	14194 (13.30)	16486 (14.86)	5779 (5.63)
	TOTAL	106717	110931	102640

Note: Figures in bracket are percentages of total.



TABLE 3

INDUSTRYWISE CAPITAL COST AND PHASING OF CAPITAL EXPENDITURES ON PROJECTS SANCTIONED BY IDBI AND ICICI DURING 1979

(Rupees in crores)

Sr. No.	Industry	Total Projects cost	Years				Number of projects	Completion expected in				
			1978	1979	1980	1981		1982 and onwards	The same year	The next year	The year after	Four or more years
1.	Automobiles & Cycles	54.94 (4.65)	1.50	11.92	37.43	4.09	—	8	2	4	2	—
2.	Cement	131.92 (11.6)	13.48	36.10	45.44	36.50	—	7	—	1	6	—
3.	Chemicals & Petrochemicals (except Fertilizers & Pesticides)	147.80 (12.57)	3.91	29.85	72.72	27.26	14.16	33	9	17	6	1
4.	Electrical Equipment	38.29 (3.24)	—	7.70	16.66	5.88	8.25	17	8	5	—	4
5.	Electricity, Gas & Steam	34.50 (2.92)	—	0.71	12.03	10.93	10.83	4	1	1	—	2
6.	Fertilizers & Pesticides	267.08 (22.60)	—	18.18	136.75	105.24	6.91	5	1	1	2	1
7.	Food Products (other than sugar)	6.92 (0.59)	—	2.46	3.40	1.06	—	5	2	2	1	—
8.	Glass, Pottery etc.	25.16 (2.13)	0.33	6.61	17.25	0.96	—	8	1	6	1	—
9.	Machinery Manufacturer (Other than electrical)	47.16 (3.99)	—	8.09	25.57	8.10	5.40	28	8	17	1	2
10.	Metals & Metals Products	140.70 (11.91)	3.05	43.85	73.45	13.91	6.46	56	28	23	8	5
1.	Printing & Publishing	0.46 (0.04)	—	0.46	—	—	—	2	2	—	—	—
2.	Pulp, Paper & Paper Products	60.67 (5.13)	1.69	22.89	27.22	9.67	—	25	5	12	8	—
3.	Rubber Products	0.47 (0.04)	—	0.47	—	—	—	2	2	—	—	—
4.	Shipping	—	—	—	—	—	—	—	—	—	—	—
5.	Sugar	8.69 (0.74)	0.16	4.62	3.24	0.67	—	3	1	1	1	—
6.	Textiles	190.74 (16.14)	3.94	74.58	67.03	38.94	5.45	91	35	29	25	2
7.	Wood, Cork & Hardboard	3.42 (0.29)	—	0.53	2.89	—	—	2	—	2	—	—
8.	Miscellaneous	22.74 (1.92)	1.00	16.29	5.45	—	—	21	12	9	—	—
TOTAL		1181.66	28.96	284.51	547.32	263.41	57.46	317	110	130	60	17