3

Investment Allowance—Tax Revenue Forgone

Introduction

One of the terms of reference of this study relates to the estimation of the likely cost to the exchequer involved in granting the investment allowance to the corporate sector. Ultimately, evaluation of any tax incentive involves an appraisal of the costs as against the resulting gains. The cost of providing a tax incentive could be viewed either in a limited sense as a loss in tax revenue, or in a larger sense a tax expenditure,"the difference between government expenditure with and without the incentive" (Milnes and Huiskamp, 1977). Further, a distinction can also be made between short-run or 'first round' cost, ignoring the potential revenue gain due to availing of the incentive, as against long-run or 'full cost', which takes into account such gains.

In this chapter we confine ourselves to measuring the cost of granting the investment allowance as tax revenue forgone. We make an attempt to estimate both the 'short-run' or 'first round' revenue loss, as well as the the long-run or 'full' loss to the exchequer with the help of the econometric results of the investment function, obtained in the previous chapter. We also attempt, with the help of a survey, to identify the major categories of beneficiary companies classified according to their type, size class, category of industry, and so on, which have availed of the investment allowance and are thereby responsible for the tax revenue forgone.

Data and Methodology

In estimating the tax costs due to the grant of investment allowance over the period 1960-61 to 1982-83, we mainly depended upon *Financial Statistics of Joint Stock Companies* (RBI). Also, a detailed analysis of the pattern of revenue loss distribution among different types of companies has been attemped by means of a sample of income tax assessment records obtained from the Income Tax Department. The purpose is to bring out sectoral biases, if any, in the pattern of availing of the investment allowance provision. For collecting the data from the assessment records, a proforma was circulated among Income Tax Commissioners located in different States. Though the sample was originally drawn on a stratified random basis, the final sample has turned out to be somewhat different from the intended sample, due to some non-response.

The sample consists of 156 companies out of which investment allowance is claimed by 149 companies. About 54 per cent are public limited, 36 per cent are private limited, 8.3 per cent belong to the government sector and the remaining could not be classified. Almost all the companies are large in terms of size, having paid-up capital above Rs 50 lakh. About 60 per cent fall in the class of Rs 1 crore to Rs 20 crore. About 28 per cent had been making losses. However, the gross income of 45 per cent of the companies ranged from Rs 1 crore to well over Rs 25 crore per annum. The sample covered 10 categories of industries, 31 per cent of the sample companies belonging to engineering industry, 20 per cent to chemical and pharmaceuticals, 11 per cent to textiles, 8 per cent to cement, and the rest to paper, sugar, edible oil and so on. Over one-third of the sample companies are located in backward areas.

a. Estimation of revenue forgone in the short-run

For the three samples of public limited, private limited and government companies, estimates of the short-run tax revenue forgone due to the grant of development rebate/investment allowance are not directly available. Therefore, we have computed it indirectly. There are two data items from which the tax loss can be indirectly estimated. First, the gross investment (plant and machinery) of the manufacturing segment of the sample multiplied by the rate of investment allowance and the appropriate effective tax rate can be taken as an estimate of the tax revenue forgone. However, the limitation of this method is that it assumes that the entire machinery investment of the manufacturing sector is eligible for the tax incentive, which is not true. Certain categories of plant and machinery, as specified from time to time in the Income-tax Act and Finance Acts, are not eligible for development rebate/investment allowance. For example, in the case of investment allowance, plant and machinery used in the production of certain categories of industries as specified in the Eleventh Schedule of the Income-tax Act are not eligible for investment allowance. The aggregate data used by us do not facilitate the segregation of machinery into different categories. Therefore, this method is likely to give an unduly large estimate of the tax loss.

The other source is the statutory reserve. The yearly addition to the development rebate/investment allowance reserve represent 75 per cent of the investment allowance. For example, if k is the rate of investment allowance and a is the proportion of the allowance to be credited to the reserve, then the addition to the investment allowance reserve during the year would be ak per rupee of the eligible investment. Therefore, using the investment reserve figure it is possible to compute the eligible investment and the tax loss. While there is an element of underestimation in the second method because it fails to take into account the yearly withdrawal from the statutory reserve, it avoids the error of taking the non-eligible investment into account in the estimation of the tax loss. The downward bias that is built in the second method is expected to be much less serious compared to the upward bias of the first method. Therefore, we followed the second method for estimating the short-run tax revenue forgone due to the tax incentives.

The estimates of the tax forgone might still differ from the true tax loss. Apart from the statistical errors, there is an important reason for that. The effective use of development rebate or investment allowance in any year, is subject to the condition that the company makes sufficient profits in that year. If the current profits are not sufficient, then the allowances can be carried forward up to a maximum of eight years subject to extension of the period where required in terms of s. 80 VVA of the Income-tax Act. Detailed computation of the tax loss, taking into account such carry-forward conditions, is possible only at the individual level and not at the aggregate level. Any such attempt at the aggregate level might yield spurious results. However, we should not rule out the possibility that the claims as computed by us, in respect of plant and machinery in any particular year, can be actually spread over the subsequent years as well. In other words, our estimate of tax forgone shows the maximum claim in respect of current year's investment whereas the figure of true tax forgone is related not only to current year's investment but also to the past years' investments in plant and machinery. The latter can be regarded as a moving average of the figures computed by us. The revenue forgone in the short-run due to the investment incentives from 1960-61 onwards is shown in Table 3.1. Wherever there are gaps due to non-availability of data, figures are interpolated.

b. Estimation of revenue forgone in the long-run

In the preceding chapter, while estimating the function we noticed that whereas in the case of public and private limited companies the cost of capital variable plays a significant role in determining the investment, in the case of government companies, the variable turns out to be not important for investment decisions. In view of that, it can be concluded that in so far as government sector companies are concerned, the revenue forgone due to investment allowance in the long-run is the same as that in the short-run. Whatever investment has taken place in these companies, is irrespective of the tax policies. Investment allowance has no discernible impact on their investment growth. Therefore, there is no 'revenue gain' in their case.

In the case of public and private limited companies, the variable representing the rental cost of capital has turned out to be significant, making it possible to conduct some simulation exercises. Using the investment equation, we estimated the hypothetical series of investment in the absence of investment incentives (development rebate, initial depreciation and investment allowance). After converting the difference between the fitted and simulated series of investment into current prices, they are cumulated to obtain the likely additional capital stock series. The likely additional tax yield due to the tax incentives is computed by first estimating the return on the additional capital stock and then multiplying the return with the effective tax rate. The resulting additional tax yield is subtracted from the short-run revenue forgone, to obtain its long-run counterpart.

Estimates of Tax Revenue Forgone

a. Short-run estimates

The loss to the corporation tax revenue ranged from Rs 7.04 crore in 1960-61 to Rs 285.5 crore in 1982-83 (Table 3.1). The

TABLE 3.1

Estimated Tax Revenue Forgone to Corporate Tax Revenue (Short-run)

(Rs crore)

Year	*Corporate tax revenue*	*Tax revenue forgone due to development rebate/investment allowance*	*Per cent of share in tax forgone in corporate tax revenue (%)*
1960-61	111.05	7.04	6.34
1961-62	156.46	7.29	4.66
1962-63	221.50	7.67	3.46
1963-64	274.59	7.42	2.70
1964-65	314.05	9.89	3.15
1965-66	304.84	13.71	4.50
1966-67	328.90	16.75	5.09
1967-68	310.51	17.90	5.76
1968-69	299.77	17.46	5.82
1969-70	353.40	13.45	3.89
1970-71	370.52	12.14	3.27
1971-72	472.07	14.15	2.99
1972-73	557.86	23.37	4.19
1973-74	582.60	33.89	5.81
1974-75	709.48	43.95	6.19
1975-76	861.70	47.69	5.53
1976-77	984.23	71.83	7.29
1977-78	1220.77	90.75	7.43
1978-79	1251.47	108.79	8.69
1979-80	1391.90	128.64	9.24
1980-81	1310.79	153.53	11.71
1981-82	1969.97	193.24	9.81
1982-83	2184.51	270.66	12.38

revenue loss as a proportion of corporation tax revenue ranged from 6.34 per cent in 1961-62 to as high as 13 per cent in 1982-83 (Table 3.1). It averaged to 4.06 per cent between 1960-61 and 1964-65, to 5.0 per cent between 1965-66 and 1969-70, and to 4.49 per cent between 1970-71 and 1974-75, 7.63 per cent between 1975-76 and 1979-80, and for the last three years it was 11.53 per cent. Particularly after 1979-80, the revenue forgone was notably higher.

Table 3.2 gives the relative shares of the tax revenue forgone in the short-run for government and non-government

TABLE 3.2

Estimated Tax Revenue Forgone due to Development Rebate/ Investment Allowance (Short-run) (1960-61 to 1982-83)

Year	*Government*		*Non-government*			
			Public limited		*Private limited*	
	Rs crore	*% share*	*Rs crore*	*% share*	*Rs crore*	*% share*
1960-61	2.12	30.2	4.01	56.6	0.93	13.3
1961-62	2.54	34.1	3.94	53.2	0.93	12.8
1962-63	1.73	22.0	4.91	64.4	1.03	13.5
1963-64	2.33	31.4	4.41	59.5	0.68	9.1
1964-65	3.20	32.4	5.88	59.5	0.81	8.2
1965-66	6.18	45.1	6.54	47.7	0.97	7.1
1966-67	8.74	52.2	6.87	41.0	1.14	6.8
1967-68	5.30	29.8	11.12	62.1	1.45	8.1
1968-69	6.79	38.9	9.15	52.4	1.52	8.7
1969-70	5.67	41.2	7.01	51.0	1.07	7.8
1970-71	4.54	37.4	6.70	55.2	0.90	7.4
1971-72	6.62	46.8	6.37	45.0	1.16	8.2
1972-73	12.95	55.4	8.13	34.8	2.29	9.8
1973-74	15.05	44.4	13.73	40.5	5.12	15.1
1974-75	20.00	45.5	19.03	43.3	4.92	11.2
1975-76	22.31	46.8	22.22	46.6	3.15	6.6
1976-77	30.96	43.1	37.57	52.3	3.38	4.7
1977-78	42.11	46.4	45.56	50.2	3.08	3.4
1978-79	48.30	44.4	58.31	53.6	2.28	2.1
1979-80	56.86	44.2	68.05	52.9	3.73	2.9
1980-81	77.23	50.3	70.32	45.8	5.83	3.8
1981-82	93.14	48.2	93.91	48.6	6.18	3.2
1982-83	131.62	46.1	131.62	51.3	7.42	2.6

sectors due to the tax incentives. The share of the private sector in the revenue forgone is only slightly higher compared to that of the public sector companies. Also, public limited companies account for over 50 per cent of the revenue loss, whereas private limited companies account for about 6 per cent of the revenue loss.

b. Long-run estimates

Table 3.3 shows the additional tax revenues of the government as a result of the inducement effect of the three invest-

TABLE 3.3

Estimated Additional Tax Revenue due to the Impact of Investment Incentives (1960-61 to 1982-83)

(*Rs crore*)

Year	*Public limited companies*	*Private limited companies*	*Total revenue gain*
1960-61	0.04	0.03	0.07
1961-62	0.09	0.10	0.19
1962-63	0.19	0.19	0.38
1963-64	0.22	0.25	0.47
1964-65	0.27	0.29	0.56
1965-66	0.43	0.34	0.77
1966-67	0.53	0.46	0.99
1967-68	0.41	0.41	0.82
1968-69	0.44	0.46	0.90
1969-70	0.53	0.54	1.07
1970-71	0.64	0.41	1.05
1971-72	0.97	0.60	1.57
1972-73	1.16	0.66	1.82
1973-74	1.70	0.93	1.63
1974-75	3.88	1.38	5.26
1975-76	2.79	1.13	3.92
1976-77	3.28	1.48	4.76
1977-78	4.43	1.69	6.12
1978-79	7.84	1.78	9.62
1979-80	11.92	2.26	14.18
1980-81	11.59	2.22	13.81
1981-82	14.50	2.57	17.07
1982-83	16.54	2.65	19.19

ment incentives, namely, development rebate, initial depreciation, and investment allowance, for public limited and private limited companies. The revenue gain averaged to Rs 0.62 crore during the sixties and was around Rs 2.5 crore during the early seventies whereas after 1976-77, it went up to a much higher level, the average being around Rs 12 crore for the five years, 1977-78 through 1982-83. The reduction in the revenue loss during these years ranged from 6.12 per cent to 19.2 per cent. The estimated additional revenue is deducted from the short-run tax revenue forgone to obtain the net revenue loss due to these incentives, which is as shown in Table 3.4.

TABLE 3.4

Tax Revenue Forgone (Long-run) due to Investment Incentives (1960-61 to 1982-83)

(*Rs crore*)

Year	*Government companies*	*Public limited companies*	*Private limited companies*	*Total*
1960-61	2.12	3.97	0.86	6.95
1961-62	2.54	3.85	0.74	7.13
1962-63	1.73	4.72	0.65	7.10
1963-64	2.33	4.18	0.43	6.94
1964-65	3.20	5.59	0.52	9.31
1965-66	6.18	6.20	0.63	13.01
1966-67	8.74	6.41	0.68	15.83
1967-68	5.30	10.71	1.04	17.05
1968-69	6.79	8.69	1.08	16.58
1969-70	5.67	6.47	0.53	12.67
1970-71	4.54	6.29	0.49	11.32
1971-72	6.62	5.77	0.56	12.95
1972-73	12.95	7.47	1.63	22.05
1973-74	15.05	12.80	4.19	32.04
1974-75	20.00	15.15	3.54	38.69
1975-76	22.31	19.43	2.02	43.76
1976-77	30.96	34.29	1.90	67.15
1977-78	42.11	41.13	1.39	84.63
1978-79	48.30	50.47	0.50	99.27
1979-80	56.86	56.13	1.47	114.46
1980-81	77.23	58.73	3.61	139.57
1981-82	93.14	79.41	3.61	176.16
1982-83	131.62	115.08	4.77	251.47

Disaggregated analysis of the short-run revenue loss on the basis of the sample assessment records shows that the deduction under s. 32A during the period 1977-78 to 1982-83, formed as much as 60 per cent of the total tax deduction claimed by the sample companies. The other major tax deductions claimed were under Chapter VIA of the Income-tax Act, particularly under s. 80J (or tax holiday from 1981-82, s. 80I) or s. 80HH (backward area development allowance). However, there is a marked difference between public sector and private sector companies regarding these shares. In the case of private sector companies, the deduction under investment allowance formed 67 per cent of the total tax deductions, whereas in the case of government sector companies tax holiday was the major deduction. Further, the time trend shows that in the case of the private sector companies the importance of investment allowance in the total deduction has been growing. It grew from 58.9 per cent in 1977-78 to 81.5 per cent for public limited companies, and from 38.7 per cent to 79 per cent for private limited companies (Table 3.5).

TABLE 3.5

Proportion of Investment Allowance in Total Tax Deductions—by Public Limited and Private Limited Companies (1977-78—1982-83)

(Per cent)

Year	*Public limited*	*Private limited*
1977-78	58.90	38.74
1978-79	63.10	62.35
1979-80	59.43	51.20
1980-81	78.26	55.23
1981-82	81.53	78.98
1982-83	58.41	71.02

Source: The sample of Income tax Assessment Records.

c. Extent of investment allowance deduction by different characteristics of companies

Size classification of companies confirms that the deduction was higher for large sized companies. About 30 per cent of the investment allowance deduction of the sample companies was accounted for by companies with paid-up capital Rs 1 crore to Rs 5 crore and 26.5 per cent by those that fall in the range of Rs 10 crore to Rs 15 crore (Table 3.6).

TABLE 3.6

Investment Allowance and other Major Tax Deductions—Paid-up Capital Classification

(*Per cent*)

Paid-up capital size class (Rs crore) / *Item*	*0-0.5*	*0.5-1.0*	*1-5*	*5-10*	*10-15*	*15-20*	*Above 20*	*Un-classified*
1. Sample portion	9.5	13.5	43.2	9.5	4.1	1.4	1.4	17.6
2. Gross income	0.5	2.5	29.2	25.7	25.7	11.3	0.3	5.7
3. Tax	0.2	2.8	26.1	25.7	26.0	12.8	0.3	6.1
4. Total deductions	2.2	2.9	28.6	9.4	27.1	15.5	3.1	11.3
(*a*) s. 32A	2.6	2.9	30.4	11.0	26.6	18.2	3.0	5.3
(*b*) ch. VIA	1.3	2.7	24.8	6.0	28.3	10.1	3.3	23.5
(*i*) s. 80HH	1.2	5.4	29.6	0	37.1	0	2.2	24.5
(*ii*) s. 80 J/I	1.6	1.6	21.2	6.8	25.0	14.0	4.7	25.2

Source: As for Table 3.5.

Income classification of the sample shows that companies whose income was over Rs 25 crore were responsible for 54 per cent of the investment allowance deduction (Table 3.7). An interesting aspect is that the loss-making companies also accounted for a sizable portion (25.6 per cent) of the investment allowance deduction.

Industry-wise classification shows that a large part of the investment allowance deduction was due to engineering industries, whose share of the deduction in the sample is 46 per cent (Table 3.8). The other major industries were chemicals and

TABLE 3.7

Investment Allowance and other Major Tax Deductions —Income-size Classification

(Per cent)

Paid-up size class (Rs crore) / *Item*	*Loss making*	*0-1*	*1-10*	*10-25*	*Above 25*	*Non-reportive*
1. Sample portion	28.3	5.0	17.2	11.1	17.2	21.2
2. Gross income	(—)19.2	0.1	5.0	12.7	101.4	NA
3. Tax	0	0.1	4.8	10.8	84.4	NA
4. Total deductions	21.8	1.5	8.4	6.8	59.4	2.1
(*a*) s. 32A	25.6	2.2	9.3	6.0	54.1	3.0
(*b*) ch. VI A	14.1	0.6	6.5	8.7	69.5	0.4
(*i*) s. 80 HH	0	0.6	7.5	12.0	80.0	0
(*ii*) s. 80J/I	20.8	0.6	5.7	7.0	65.4	0.5

Source: As for Table 3.5.

TABLE 3.8

Investment Allowance and other Major Tax Deductions —Industry-wise Classification

(Per cent)

Industry / *Item*	*Cement*	*Chemical*	*Engineering*	*Paper*	*Plantation*	*Sugar*
1. Sample portion	7.7	20.0	30.7	3.1	3.1	6.2
2. Gross income	3.0	15.8	52.1	11.4	1.1	5.5
3. Tax	1.0	14.0	55.7	12.0	1.0	4.4
4. Total deductions	4.4	7.3	46.0	21.8	0.3	4.5
(*a*) s. 32A	4.4	6.5	46.1	19.7	0.2	4.9
(*b*) ch. VIA	4.3	8.8	45.7	26.0	0.7	3.8
(*i*) s. 80HH	0	15.4	24.9	33.2	0	0
(*ii*) s. 80J/I	6 0	6.6	46.4	25.7	0.24	5.0

TABLE 3.8 (Contd.)

(*Per cent*)

Industry / *Item*	*Textile*	*Vegetable oil*	*Mineral*	*Misc.*	*Unclassified*
1. Sample portion	10.8	4.6	1.5	9.2	3.1
2. Gross income	5.2	0.7	0.01	5.1	0.3
3. Tax	4.8	0.7	0	5.8	0.6
4. Total deductions	8.3	0.8	2.4	3.9	0.2
(*a*) s. 32A	10.3	0.9	2.9	3.8	0.3
(*b*) ch. VIA	4.4	0.7	1.4	4.2	0.1
(*i*) s. 80HH	2.0	1.3	0	23.3	0
(*ii*) s. 80 J/I	5.0	0.7	2.1	2.3	0.2

Source: As for Table 3.5.

pharmaceuticals, textiles, and cement.

Area-wise classification shows that the share of investment allowance deduction, in both backward and non-backward areas, was almost equal (Table 3.9).

TABLE 3.9

Investment Allowance and other Major Tax Deductions —Backward and Non-backward Area Classification

(*Per cent*)

Area	*Backward*	*Non-backward*
1. Sample portion	34.4	65.6
2. Gross income	29.5	70.5
3. Tax	30.4	69.6
4. Total deductions	58.2	41.8
(*a*) s. 32A	51.0	49.3
(*b*) ch. VI A	72.7	27.3
(*i*) s. 80HH	100.0	0
(*ii*) s. 80 J/I	73.1	26.9

Source: As for Table 3.5.

Summary

Investment allowance had been a major tax deduction. About 12 to 15 per cent of the corporation tax revenue was forgone by the government due to the tax provisions under section 32A of the Income-tax Act. In absolute terms the revenue loss was Rs 90 crore in 1977-78 and it went up to Rs 271 crore in 1982-83.

Roughly 46 per cent of the revenue loss due to investment allowance arose in the government sector and about 48 per cent arose in the public limited companies. The share of the government companies in the revenue loss had been rising.

In contrast, the long-run revenue gain as a result of additional income generation from investments spurred by the incentive was not appreciable. The revenue gain due to investment allowance, for instance, was estimated at an average of Rs 12 crore per year which is around 15 per cent of the revenue loss arising in the private corporate sector. But statistical exercise shows that the revenue gain in the government sector was negligible as the provision of investment allowance failed to show any significant impact.

The detailed analysis of the tax forgone on the basis of a sample of income tax assessment records shows that investment allowance formed 46 per cent of the total tax deduction for the large-sized companies. In the case of private sector corporations the share is even higher at 67 per cent, the major portion of which was claimed by the bigger companies, whether they made profits or not. About 25 per cent of the revenue loss is due to those companies which have been making losses.