CHAPTER III

FACTOR COST OF PRIMARY EDUCATION IN TAMIL NADU

THE FRAME WORK

Resources cost and current expenditure

3.1.1. The growth of expenditure on primary education is enormous but still when compared to the growth trend in secondary and higher education it is not upto the mark. The periodic educational statistical books and pamphlets give only the education expenditure and not educational costs.

3.1.2. The performance budget furnishes expenditure on different programmes and activities. Table III-1 indicates the level of expenditure on different programmes. It is seen that the expenditure on primary education in 1970-71 was 56.34 percent including expenditure on

TABLE III-1

PERCENTAGE ANALYSIS OF EXPENDITURE ON SCHOOL EDUCATION— PROGRAMME AND ACTIVITY CLASSIFICATION, 1970-71 (TAMILNADU)

Details		Budget Estimate (Rs in lakhs)	Percentage
1		2	3
Direction, Inspection including Policy Formulation	..	102.66	1.75
Elementary Education	..	3047.62	52.10
School meals, Central kitchen and CARE	..	248.21	4.24
Free supply of books and slates	..	12.44	0.21
Secondary Education	..	2103.32	35.95
Improvement of facilities for teaching Science	..	25.00	0.43
Special schools (Training schools, Schools for the defectives, Oriental schools and pre-primary schools)	..	117.03	2.00
Anglo-Indian Schools	..	5.63	0.10
Adult Education	..	0.21	-
Orphanages	..	42.00	0.72
Libraries	..	42.86	0.74
Physical Education and schools	..	14.90	0.26
National Cadet Corps	..	55.67	0.96
Scholarships and concessions	..	5.94	0.10
State Institute of Education	..	2.99	0.05
Madras English Language Teaching Campaign	..	2.86	0.05
Pre-vocational Training Centre	..	1.60	0.03
Sainik School	..	9.86	0.17
Other grants--Miscellaneous	..	8.38	0.14
TOTAL	..	5849.17	100.00

Source : Performance Budget of Tamil Nadu for 1970-71.

midday meals. Table III-2 shows the expenditure on school education according to various heads of expenditure such as establishment, travel expenses, equipment, grants-in-aid etc. It is seen that subsidies and grants-in-aid take a lion's share of the total expenditure. It amounts to 83.72 percent.

3.1.3. The term 'cost' is used rather vaguely in all the educational statistics. The term 'unit costs' noted in the statistical returns, refers to expenditure during the period. In fact it gives both recurring expenditure and additional expenditure on capital account and represents only the financial resources allocated to education for the purchase of goods and services during the year without reference to the rate at which the output will be made available. There is need to modernise the educational accounting system so that it can serve as a better management tool instead of being a repository of historic facts used for vague comparisons. If it should be effectively useful for decision making, there is need for accounting reforms on modern lines. Here an attempt is made to measure, rather estimate the resources cost on primary education in Tamil Nadu.

Period

3.1.4. With a view to make the estimation close to reality, the factor cost of primary education for the year 1970-71 is computed because the cross section data on earnings for educated employees are available from the National Sample Survey for the year. In addition, various other data are also available from the 1971 census.

TABLE III-2

EXPENDITURE ON SCHOOL EDUCATION—OBJECTWISE CLASSIFICATION
TAMIL NADU — 1970-71

Details		Budget Estimate 1970-71	Percentage
1		2	3
Establishment	..	395.36	6.75
Travel	..	5.70	0.10
Other charges	..	127.32	2.17
Grants to aided schools	..	1288.46	22.03
Grants to Panchayat Union schools	..	2297.46	39.30
Subsidies to Local Bodies	..	246.28	4.20
Block grant to District Board schools	..	1063.76	18.19
Buildings	..	124.63	2.14
Material and equipment	..	36.04	0.61
Miscellaneous	..	264.16	4.51
TOTAL	..	5849.17	100.00

Source : Performance Budget of Tamil Nadu for 1970-71.

Methodology

3.1.5. The area of the study is confined to the formal system of primary education which is accounted in the education budget. A recent survey on unrecognised schools revealed that a vast number of unrecognised primary schools (nearly 2,000) are in existence in which nearly 2 lakhs of pupils are studying. As these institutions do not render any statistics or accounts to the Education Department even the rudimental particulars are not available for them. Further, non-formal education relating to the elementary level is excluded and the expenditure on pension and other overhead expenditure of the education secretariat at State and Central levels could not be included as sufficient data are not available. The estimation is made on lines of methodology adopted by Prof.T.W.Schultz in the 'Capital Formation by Education' and the studies made by A.C.Harberger[1] (1966), V.N.Kothari[2] (1967), Nalla Gounden[3] (1967) Blaug[4] et al (1969) and Pandit[5] (1973). It is attempted here to estimate the opportunity cost of input factors of education. The cost factors used up in the education process has been analysed from social and private points of view.

Cost factors

3.1.6. The costs of education are defined here as the real resources used up in the production of educational

1. A.C.Harberger: 'Investment in men versus investment in machines--the case of India', Education and economic development, Chicago: Aldine & Co., 1966.
2. G.N.Kothari: 'Return to Education in India' in Baljit Singh(ed) Education as Investment, Meerut Meenakshi Prakashan, 1967
3. A.N.Nalla Gounden: Capital Formation and its role in economic development in India, Kurukshetra University Ph.D.thesis (unpublished)
4. M.Blaug, et al, 'The causes of graduate unemployment in India, Studies on Education, London: Allen Lane. The Penguin Press, 1969
5. H.N.Pandit: Investment in Indian Education size, sources and effectiveness, IIEP occasional paper No.43, Unesco, 1976.

capital 'assets' in the form of educated students. It may be noted here that the term expenditure as used in the budgetary sense, on the other hand, is the money value of resources assigned during a given year to the production of educational capital whatever be the date at which the product will be made available. Therefore, the main concern here is with the measurement of costs of annual flow of inputs in the form of teachers' and students' time, obsolescence and interest cost of educational plant and equipment; books, stationery and other materials used, and the excess living cost and 'leisure' foregone by the students. Proper allocation of items of cost incurred by the society as a whole and those incurred by the students and their parents is given below :

(1) Social costs : (i) Institutional costs :
- (a) current costs
- (b) capital costs

(ii) Private costs :
- (a) non-fees
- (b) earnings foregone

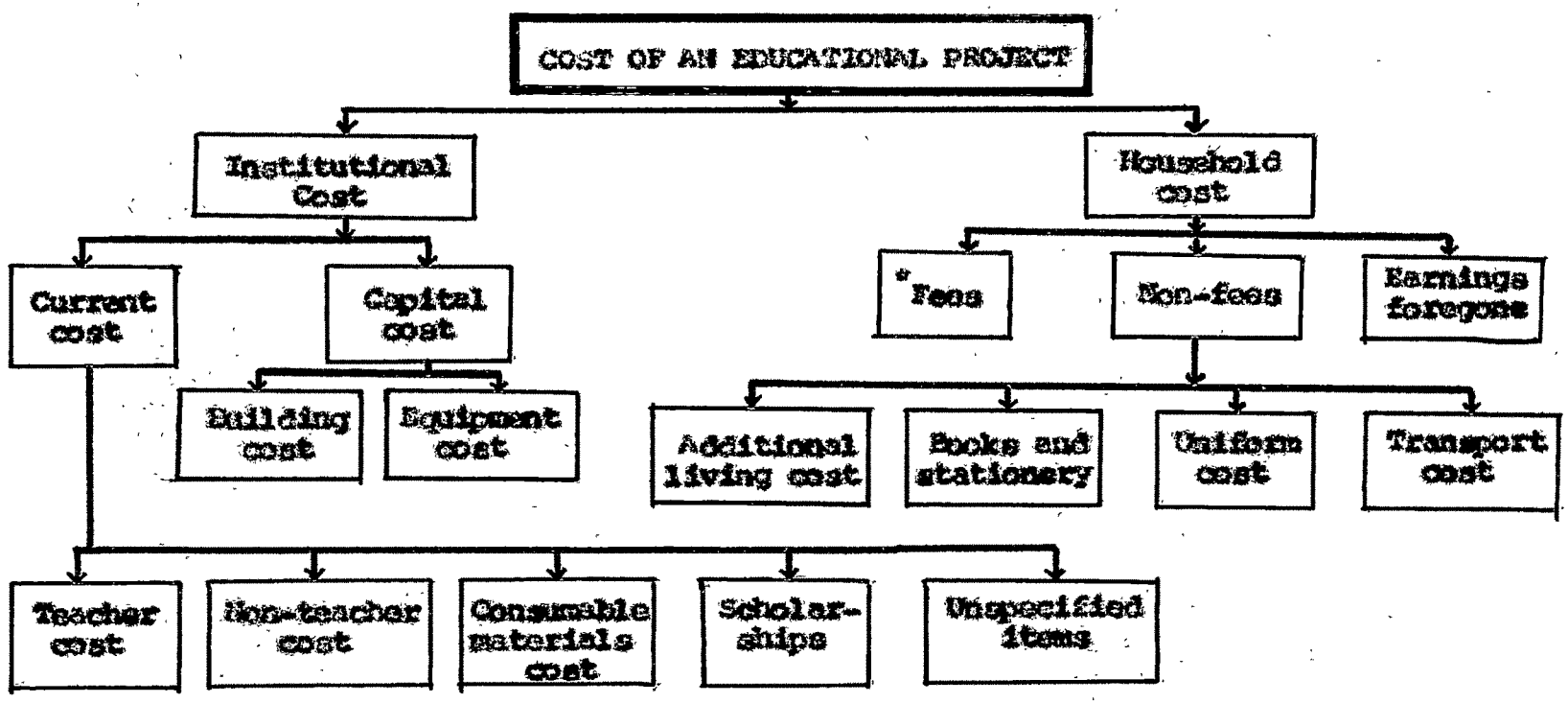
(2) Private costs : (Household)
- (i) Non-fees
- (ii) Earnings foregone
- (iii) Net fees, i.e., fee paid minus scholarships received

A detailed classification of costs of education is given in the diagram.

Opportunity cost

3.1.7. In the above kinds of costs there are two types of expenditure, (a) direct costs and (b) indirect costs.

DIAGRAM



* Net of freeships and scholarships

COST STRUCTURE OF EDUCATIONAL INVESTMENT

The direct costs consist of governmental as well as private institutional expenditure and fees and other incidental expenses incurred by the pupils. The indirect costs consist of the alternative earnings foregone by the students while at school and constitute an extremely important element in the cost of education.[6]

Transfer charges

3.1.8. The transfer payments, such as scholarships and financial assistance given by the educational institutions or private donors, do not form part of the social costs of education. They are merely transfer payments. On the other hand, these transfer payments not only form part of the compensation for the earnings foregone by the students but also constitute a significant source of private finance for education. However, fee payment is a real burden on the parents and it is shown as an item of cost after making necessary adjustments for scholarships received from the educational institutions or other agencies.

EARNINGS FOREGONE

The Importance

3.2.1. Of all the cost factors, earnings foregone is the most important and interesting factor. Here the discussion is taken first on the income foregone by pupils. In fact "Earnings foregone by the students constitute an important component of private and social costs of education".[7]

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6. V.N.Kothari: Factor Cost of Education in India', The Indian Economic Journal, a quarterly journal of the Indian Economic Association, Vol.XIII,No.5, April-June, 1966. p.631.
7. M.N.Pandit, Ibid. p.33.

3.2.2. There is difference of opinion regarding earnings foregone as one of the cost factors. Blaug et al argued that opportunity cost of students' time should be adjusted for the incidence of unemployment. One may also say that earnings foregone by students in the higher level of education would be higher than the earnings of workers who stopped education at lower levels. This is because the students going in for the higher level of education are believed to have more ability factor than those who stop education at lower levels.

3.2.3. It is sometimes argued that due to the unemployment the opportunity cost of students' time is zero because a marginal addition to the labour force will automatically remain unemployed. Keeping in view these arguments, it seems Pandit believed that the opportunity cost of students' time should be taken equal to the earnings of workers at the lower level of education. Unlike Blaug, he did not adjust earnings foregone for the unemployment factor.[8] In a developing country like ours, where there is no full employment opportunity, it is viewed that 'earnings foregone' does not arise as they might not have got jobs.

3.2.4. Another concept is that whether they got the job or not they have foregone the leisure by toiling for the education. "One must distinguish between disguised unemployment which refers to zero marginal productivity of labour and open unemployment which refers to the availability of labour at the current wage rate and has no implication about its productivity as such. In case

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8. M.N.Pandit, Ibid. p.58.

of disguised unemployment additional output is impossible; in case of open unemployment additional output is possible if currently unemployed can be put to work. Further, the concept of disguised unemployment is applicable to vast masses of unskilled workers while it would be more appropriate to talk of open unemployment in case of skilled and educated persons. Further, as Prof. Mary Jean Bowman has pointed out(in Economics of Higher Education Ed. Selma Mushkin, pp.81-82) from the long-run social point of view the foregone earnings cannot be zero because from the long-run point of view education is just one of the many possible ways of utilising the time of the unemployed labour. One must take into account the whole complex of alternative arrangements. One cannot therefore accept the proposition that the foregone earnings are zero.[9]

3.2.5. The Dharmapuri District Survey on Dropouts revealed that though there is compulsory education upto the age of 14, in reality children below 14 also worked in sundry jobs. The report says, "Technically speaking, such laws as the Factories and Mines Acts and the Shops and Establishments Act prohibit the employment of child labour below 14. Besides, the State has been directed, under Article 45 of the Constitution of India, to provide for free and compulsory education to youngsters upto 14 years of age. Notwithstanding all these legal provisions, child labour is a reality in the country in the non-prohibited areas, such as agriculture household occupations, domestic services, shops and so on." [10]

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9. V.N.Kothari, op cit. p.643.

As such the earnings foregone is computed for children aged 10 onwards.

Computation of earnings foregone

3.2.6. In order to estimate the earnings foregone the data required are: (a) the number of pupils by the stages of education, age, sex and rural urban location. The stagewise and agewise data are available separately in the Educational Statistics ('A' form), but there is no statistics giving the agewise number of pupils based on rural urban location. The following table gives the agewise and stagewise distribution of students in Tamil Nadu in 1970-71 :

TABLE III-3

AGE AND SEX COMPOSITION: PUPILS IN PRIMARY LEVEL IN TAMILNADU (1970-71)

Level	Sex	5-10 years	10-15 years	15 years & above	Total
1	2	3	4	5	6
I-V	Boys	2404739 (83.46)	476855 (16.54)	1930 (0.06)	2883524 (100.0)
	Girls	1861862 (85.58)	312920 (14.38)	757 (0.04)	2175539 (100.0)
	Total	4266601	789775	2687	5059063
VI-VIII	Boys	311 (0.04)	735342 (91.31)	69631 (8.65)	805284 (100.0)
	Girls	2002 (0.46)	392603 (89.20)	45535 (10.34)	440140 (100.0)
	Total	2313	1127945	115166	1245424

Figures in brackets indicate the percentage to total (column 6)

Source : Public Instruction Report for the year 1965-66 and Form 'A' for 1970-71

3.2.7. A few students in the age-group 5-10 in classes VI-VIII represent those around 10 years of age in Standard VI. It is seen from the table that the total enrolment was 50.59 lakhs in 1970-71 in I-V classes. The corresponding figure for VI-VIII classes was 12.45 lakhs.

Other data required

3.2.8. In order to calculate the alternative earnings, we need to know the labour force participation rates by age, sex and rural-urban location, the number of days worked by age and sex and the wage rate by age, sex, rural-urban location and educational qualification. As the data relating to these facts were inadequate, Kothari[11] made the following assumptionsin respect of primary level of education to compute the earnings foregone. He made two sets of assumptions — one for upper estimate and the other for lower estimate. It is assumed that in the rural areas the boys as well as the girls enter the labour force on completion of 10 years of age. In the urban areas the age of entry is assumed to be completion of 15 years of age. The labour force participation rates are assumed to be cent per cent for the boys of 10 and above in the rural areas and of 15 and above in the urban areas. For the girls the labour force participation rate is assumed to be 50 percent. In the absence of age-qualification specific earnings data, the following earning equivalents were assumed for the purpose of calculating the alternative earnings foregone :

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11. V.N.Kothari, op cit. p.635.

State of Education.location	Age	Earning equivalent
(a) Primary, Middle and High School students in rural areas	10-15	Child agricultural labour
(b) Primary and Middle School students in rural areas	15+	Adult male and female agricultural labour
(c) Primary and Middle School students in urban areas	15+	½ factory worker

3.2.9. Pandit[12] (1973) based his computations of earnings foregone on the following assumptions :

(i) The students above the age of 14 were considered under two separate categories, namely, students in the schools and higher institutions

(ii) The weighted average participation rate for school was 43.36 percent

(iii) Wage rates considered by him (National Council of Educational Research and Training Survey findings) :

Age-group		Median monthly income (in rupees)
6-10	..	14.5
11-13	..	16.6
6-13	..	16.0

Tamil Nadu norms

3.2.10. Fortunately for us for this study we do not have to make such elaborate assumptions and circuitous procedures

12. N.N.Pandit. Ibid. 34.

as the above scholars had to adopt. This is because the 25th round of the National Sample Survey gives the data relating to actual earnings for all age-groups and all educational levels for 1970-71 for Tamil Nadu. The Integrated Household Survey conducted in the 25th round of the National Sample Survey (1970-71) gives cross-section data on age-earnings according to qualifications. The mean annual earnings according to age-group as computed from the survey data are furnished in the following table. As the sample is large enough covering males and females in rural and urban areas, the mean annual earnings is taken as that representing of the population.

TABLE III-4

MEAN ANNUAL EARNING OF ILLITERATES AND LOWER PRIMARY SCHOOL COMPLETERS IN THE AGE-GROUP 10-19

Qualification	Number of persons included in the Survey in age-group		Mean annual earnings of age-group	
	10-14	15-19	10-14	15-19
1	2	3	4	5
			Rs	Rs
Illiterates ..	2,363	15,273	250.00	699.00
Passed Standard V.	1,100	12,065	366.00	1086.00

Source : National Sample Survey, 1971

3.2.11. On the basis of the above survey findings, the earnings foregone by students studying in I to V standards

may be considered as ₹ 250 per annum for the age-group 10-14 and ₹ 699 per annum for the age-group 15 and above. Probably, an illiterate in the age level 15-19 gains experience in the job employed and gets a better earnings. Similarly the earnings foregone by students studying in VI to VIII standards may be considered as ₹ 366 per annum for the age-group 10-14 and ₹ 1066 per annum for the age-group 15 and above. The above annual earnings figures may be considered as the mean of the representative sample for both sexes and location —rural and urban. On that basis, the aggregate earnings foregone is given in the following table for different rates of participation :

TABLE III-5

ANNUAL EARNINGS FOREGONE IN TAMIL NADU (1970-71)

(Rupees in lakhs)

Level	Annual earnings foregone for different participation rates		
	100%	75%	50%
1	2	3	4
Lower Primary ..	1993.22	1494.92	996.61
Higher Primary ..	5378.98	4034.24	2689.49
Upto Primary level ..	7372.20	5529.16	3686.10

3.2.12. Though there may not be large percentage of participation in open employment, most of the children drop out to assist their parents in their work and small scale business. Several case studies of dropouts and non-attenders

revealed that they help their parents in their business or look after the children. But for these children's help, the income of the parents which already was meagre would have dwindled to a large extent. This portion or allocation of the earnings of the parents relate to the earnings of the children and the argument that labour surplus countries like India have a zero opportunity cost of working force is questionable. As such three levels of participation rates are assumed and the earnings foregone have been calculated. Even at 50 percent participation rate the total earning foregone at primary level (lower primary + higher primary levels) amounts to Rs 3686.10 lakhs, for the year 1970-71.

INSTITUTIONAL CURRENT COSTS

3.3.1. The tables on direct expenditure on general education in Form 'A' and Public Instruction Report furnish expenditure according to types of institutions under various factors like salaries to teachers etc. These expenditures have to be re-allocated on a rational basis so as to arrive at the factor cost based on levels of education.

Salaries to teachers

3.3.2. The public expenditure under the item salaries to teachers is given according to the types of schools. In secondary schools there are pupils relating to all the three levels/stages. There are pupils studying in Standards I to V, VI to VIII and IX to XI. For our computation, we need expenditure according to the levels of education which is not available in the educational

records. So, we reallocate the typewise expenditure given in the source books according to a rational and meaningful basis.

3.3.3. Normally, the expenditure will vary in proportion to the number of pupils in a particular stage. In secondary schools there are higher grade teachers, secondary grade teachers and B.T./B.Ed. teachers. Normally B.T. or B.Eds. will take secondary level classes. Therefore it is proper to allocate the B.T. or B.Ed. teachers' salary to the secondary level. The pay scales of teachers form another set of base for distribution.

3.3.4. In 1970-71 the levelwise proportion of pupils in secondary schools was 1:11:11. That is for every pupil in I to V standards there were approximately 11 pupils in VI to VIII standards and another 11 pupils in IX to XI standards in secondary schools. The mean pay of higher grade teachers, secondary grade teachers and B.Ed. teachers were in the proportion of 12:20:25 in the year 1970-71. Combining these two proportions, we get a proportion, viz., 1:18:23. This proportion takes into account, the variation of pupils in different levels in the secondary schools and the variation in pay of teachers for different levels in secondary schools. Therefore the total expenditure on salaries to teachers in secondary schools is distributed in the proportion 1:18:23 to get the reasonable allocation of expenditure on the respective three levels of pupils in secondary schools.

3.3.5. On similar lines the expenditure in higher primary schools (including senior basic schools) is also reallocated on the basis of the compound ratio 9:5 for 1970-71.

3.3.6. Allocating the expenditure on teachers in schools, we get the following figures of levelwise expenditure on salaries to teachers in 1970-71 :

Level		Expenditure (Rs in lakhs)
Lower primary	..	3373.36
Higher primary	..	1306.84
Secondary	..	1000.96

Computation of inspection and supervision cost

3.3.7. The total indirect expenditure on inspection and supervision in 1970-71 was Rs 127.88 lakhs. It is seen from the performance budget for the year 1973-74 that Rs 8.72 lakhs were spent on direction and supervision in the collegiate department. Allocating Rs 7 lakhs towards direction and supervision of collegiate education in 1970-71 the balance of Rs 120.88 lakhs is distributed among the three levels of education based on levelwise pupils enrolment. The following break-up figures are obtained.

Level		Expenditure (Rs in lakhs)
Lower Primary	..	87.58
Higher primary	..	21.68
Secondary	..	11.62

Computation of non-teacher cost

3.3.8. This item of expenditure is reallocated on the basis of pupils enrolled at various levels in different types of schools. The connected ratios as explained in item 'salaries to teachers' are made use of and the following levelwise costs are obtained for 1970-71 :

Level		Expenditure (Rs in lakhs)
Lower primary	..	82.60
Higher primary	..	122.68
Secondary	..	113.83

Cost of equipment and other appliances (recurring)

3.3.9. Since no other rational basis is known, it is assumed that the expenditure on equipment and appliances would be in the ratio 1:2:4 in lower primary, higher primary and secondary levels. This is deflated by the ratio of pupils in these three levels to arrive at the bases for finding levelwise expenditure on equipment and other appliances. The ratio for 1970-71 is 1:22:44. Similarly the expenditure in higher primary schools is reallocated in the ratio 3:2. On this basis, the levelwise costs under this item are for 1970-71 :

Level		Expenditure (Rs in lakhs)
Lower primary	..	32.94
Higher primary	..	29.44
Secondary	..	44.80

Recurring expenditure under other items

3.3.10. This item is reallocated in the proportion of pupils in the schools. The levelwise expenditure under this item are for 1970-71 :

Level		Expenditure (Rs in lakhs)
Lower primary	..	81.62
Higher primary	..	54.94
Secondary	..	47.73

Hostel charges excluding mess charges

3.3.11. The expenditure under this item is also reallocated on the basis of pupils enrolled as no other rational base is available. The levelwise expenditure under this item is as follows for 1970-71 :

Level		Expenditure (Rs in lakhs)
Lower primary	..	18.09
Higher primary	..	12.51
Secondary	..	8.29

Total institutional costs

3.3.12. From the above reallocations the institutional costs relating to lower primary level, higher primary level and total cost for the primary level are furnished in Table III-6.

TABLE III.6

LIVELIHOOD INSTITUTIONAL CURRENT COSTS AT PRIMARY LEVEL 1970-'71

(Rupees in lakhs)

Item	Lower primary	Per-centage	Higher primary	Per-centage	Total for primary level	Per-centage
1	2	3	4	5	6	7
Salaries to teachers ..	3373.36	91.77	1306.84	84.42	4680.20	89.58
Inspection and supervision ..	87.50	2.38	21.68	1.40	109.26	2.08
Non-teacher costs ..	82.60	2.24	122.68	7.92	205.28	3.93
Equipment and other appliances	32.94	0.89	29.44	1.90	62.38	1.20
Other items ..	81.62	2.23	54.94	3.55	136.56	2.62
Hostel charges..	18.09	0.49	12.51	0.81	30.60	0.59
TOTAL ..	3676.19	100.00	1548.09	100.00	5224.28	100.00

3.3.13. From a percentage analysis of the above table we find that the major share of the cost goes towards salaries of the teachers. Nearly 90 percent of the total cost of primary level constitutes salaries to teachers, leaving very little for other developmental items.

CAPITAL COST

The problem of measurement

3.4.1. Form 'A' gives non-recurring expenditure on educational and hostel buildings, furniture and equipment appliances but no information is given about the school buildings constructed through community effort. There is no systematic accounts either in the individual institution or at the Government level to show the values of the

capital goods and assets. Here again the costs are given for the department for all levels of education and the following estimates are made with the available information.

3.4.2. Over the Fourth Plan period the total budget allotment was 4.5 crores. Considering that about 3 crores from endowments and other funds over five years, 7.5 crores would have been spent. It is divided by additional enrolment during the period, 5.2 lakhs. It gives unit place value. The unit student place value works out to be is 144.2. It is assumed to be the value of capital cost per student place for 1970-71.

Depreciation and imputed cost

3.4.3. The next important problem tackled is the estimation of the depreciation and interest rates required for the calculation of the capital costs of the educational sector. In this connection, it may be mentioned that the Central Statistical Organisation used the depreciation rates of 1.67 percent and 2.5 percent in respect of pucca and katcha buildings respectively. On the other hand, the depreciation rates used by the income tax authorities varied from 5 percent with regard to second class buildings of 'less substantial construction' to 15 percent for 'furniture and fittings' etc. Keeping in view the general composition of the physical capital stock employed in the educational sector, a 4 percent rate of depreciation was assumed to hold good for our study.

3.4.4. The notional interest cost of capital stock used

in primary education is 8 percent for 1970-71. All told, the depreciation and notional interest cost are assumed to be 4 percent + 8 percent = 12 percent of the capital cost for 1970-71. The constant method for working out the depreciation and interest cost of capital was applied because of its simplicity and with the assumption that it would not make any significant difference in the final calculations if the capital costs were worked out by using other methods. Moreover, as the very value of the capital stock itself is by an estimation, there is no point in adopting other sophisticated methods.

3.4.5. With the above assumption the total cost on school buildings (imputed rent) works out as follows :

Level		(Rupees in lakhs) 1970-71
Lower primary	..	875.41
Higher primary	..	215.44
Total	..	1090.85

Private expenditure on Education—Components

3.4.6. The private expenditure on education consists of the following items :

(a) Tuition costs : Fees, special fees etc.

(b) Non-fees : (i) Books and stationery etc.

(ii) Other expenditure on private tuition, school uniforms etc.

Primary education is free except in some private schools.

3.4.7. V.N.Kothari[13] assumed the expenditure on books, stationery etc. as Rs 2 for lower primary level and Rs 10 for higher primary level. N.N.Pandit[14] assumed Rs 2.47 for lower primary level and Rs 22.22 for higher primary level at 1960-61 prices.

THE SPECIAL STUDY ON PRIVATE EXPENDITURE

3.5.1. In all the studies carried out so far, only rough estimation has been made. "There is not much information base for the estimation of tuition and non-tuition costs in the context of Indian education. Investigators of cost studies have evolved estimates of these components by pulling out information from different sources with a limited reliability. These estimates are the weakest links in the cost analysis of Indian education".[15] For the first time, the investigator wanted to study the real private cost of education on a large scale. A questionnaire as shown in Appendix-I was designed and sent to all inspecting officers in the state to collect and send data sheets on a stratified sample basis. The responses were quite good and after scrutinising the data sheets to omit irrelevant and incorrect sheets or information, tabulation was carried out on the private expenditure on education under three heads, fees, books and stationery and other expenditure, have been computed. 2659 sheets relating to higher primary level, 5443 sheets relating to lower primary level were analysed and the unit costs have been worked out. The findings of the study are tabulated as follows :

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13. V.N.Kothari, Ibid. p.641
14. N.N.Pandit, Ibid. p.32
15. N.N.Pandit, Ibid. p.42

TABLE III-7

MEAN UNIT PRIVATE EXPENDITURE ON EDUCATION (1970-71)

Item		Lower Primary	Higher Primary
		Rs	Rs
Fees	..	-	0.29*
Books	..	10.77	21.00
Others	..	17.92	25.84
TOTAL	..	28.69	47.13

* Mean expenditure on special fees. In secondary schools special fees are levied in VI-VIII standards

3.5.2. As the parents may not be able to furnish the exact figure for the year 1970-71, the expenditure for recent years were asked and from them the expenditure is deflated on the basis of price index the corresponding rate per student is found out for 1970-71. The unit costs are multiplied by the number of students and the aggregate household private cost of education for the year for the state is obtained.

PRIVATE COSTS

Components of private cost

3.6.1. In private cost of education earnings foregone constitutes major portion. The following table shows the components of private cost of education for the year 1970-71.

TABLE III-8

PRIVATE COSTS OF PRIMARY EDUCATION IN TAMILNADU (1970-71)

(Rupees in lakhs)

Item	Lower Primary	Higher Primary	Primary (Total)
Net fees * (fees minus scholarships)	-1.35	-3.51	-4.86
Non-fee cost :			
(a) Books and stationery	544.85	261.45	806.30
(b) Other costs	906.57	321.71	1228.28
Earnings foregone (100% labour force participation rate)	1993.22	5378.98	7372.20
Earnings foregone (50% labour force participation rate)	996.61	2689.49	3686.10
TOTAL :			
(at 100% labour force participation rate)	3443.29	5958.63	9401.92
(at 50% labour force participation rate)	2446.68	3269.14	5715.82

* Negligible at primary level. Negative figures are due to the fact that some pupils receive scholarships while the education is free.

Non-fee costs

3.6.2. No tuition fees is levied upto Pre-University Class in Tamil Nadu but special fees are levied at middle level classes in secondary schools. This forms the item under fees. Private tuition costs are included in other costs in which expenses on school uniforms, transport charges, hostel additional cost, other out of pocket expenses are

included. These items have been consolidated together because these are non-uniform costs and they are many in variety. Therefore all other items except fees, books and stationery which are invariably necessary and applicable to all children have been shown separately.

3.6.3. It is found from the above table that the private costs at primary level were ₹ 9402 lakhs if we assume that all the pupils 10 and above would have been participating in labour force. Even at 10 percent participation rate private costs add upto ₹ 5716 lakhs in 1970-71, almost as large an amount as the institutional costs of ₹ 5224 lakhs shown in Table III-6. Even non-fees private costs add upto ₹ 2035 lakhs and form a little more than one-third of the total private costs.

SOCIAL COSTS

The Components

3.7.1. The social cost is arrived at by adding the private non-fee costs and earnings foregone to the institutional costs. Table III-9 shows the distribution of social cost at primary and middle levels for 1970-71.

3.7.2. The percentage of non-fee cost as a component of the social cost (at 50 percent participation rate) was 16.87 in 1970-71. The percentage of institutional cost was 52.32 in 1970-71.

3.7.3. It is inferred that in the private, cost earnings foregone forms the bulk of the cost whereas in social

TABLE III-9

SOCIAL COST OF PRIMARY EDUCATION IN TAMIL NADU (1970-71)

(Rupees in lakhs)

Item	Lower Primary	Higher Primary	Primary (Total)
Institutional cost :			
(a) Current costs ..	3676.19	1548.09	5224.28
(b) Capital costs (Imputed rent) ..	875.41	215.44	1090.85
Non-fees costs :			
(a) Books ..	544.85	261.45	806.30
(b) Others ..	906.57	321.71	1228.28
Earning foregone : (100% labour force participation rate) ..	1993.32	5378.98	7372.20
Earnings foregone : (50% labour force participation rate) ..	996.61	2689.49	3686.10
TOTAL :			
(at 100% labour force participation rate)	7996.24	7725.67	15721.91
(at 50% labour force participation rate)	6999.63	5036.18	12035.81

Source : Computed from the individual calculations made in the previous tables.

cost it is only secondary in importance because institutional cost is the major component.

UNIT COSTS

3.8.1. On the basis of the total factor costs, unit costs of primary education are computed. Unit cost when considered as percentage of per capita Net State Domestic Product provides us with an index of the efforts to be taken.

Private costs

3.8.2. The unit private cost is Rs 48.40 for lower primary level and it is Rs 262.23 for higher primary level. These rates are relating to 50 percent labour participation rate (lower estimate). The per capita Net State Domestic Product of Tamil Nadu for the year 1970-71 was Rs 618. The private cost of lower primary education is 7.8 percent of the Net State Domestic product and it is 42.4 percent of the Net State Domestic product for higher primary level. The high percentage for the higher primary level may be one of the reasons for less enrolment at that level.

3.8.3. At 100 percent labour participation rate, the private unit cost for lower and higher primary levels are Rs 60.10 and Rs 477.61. The respective percentages to Net State Domestic Product are 11.0 and 77.3.

Social costs

3.8.4. The social unit cost for lower primary level at 50 percent labour participation rate is Rs 138.33 and

it is ₹ 403.87 for higher primary level. The social cost of lower primary level works out to be 22.3 percent of the Net State Domestic Product and the social cost of higher primary level is 65.3 percent of the Net State Domestic Product for the year 1970-71.

3.8.5. At 100 percent labour participation the social unit costs for lower and higher primary levels are ₹ 150.03 and ₹ 619.25 respectively. The respective percentages to Net State Domestic Product are 25.6 and 100.2.

NET STATE DOMESTIC PRODUCT AND SOCIAL COST OF PRIMARY EDUCATION IN TAMIL NADU

3.9.1. The following table shows the Net State Domestic Product and the social cost of primary education in Tamil Nadu. The percentage of social cost to Net State Domestic Product is also shown below :

TABLE III-10

PERCENTAGE OF SOCIAL COST OF PRIMARY EDUCATION TO NET STATE DOMESTIC PRODUCT IN TAMILNADU--1970-71

(Rupees in lakhs)

*Net State Domestic Product	Percentage of participation rate assumed	Social cost or Primary Education (I-VIII Stds)	Percentage of columns 3 to 1
1	2	3	4
252046	100	15721.91	6.23
252046	50	12035.81	4.78

* Source : Directorate of Statistics, Madras.

3.9.2. In the All India study carried out by V.N.Kothari, the percentage of upper estimate of factor cost of education at all levels to Net National Income at current prices increased from 3.6 in 1950-51 to 6.5 in 1959-60. In Tamil Nadu the social cost of primary education alone constitutes 6.23 percent of the Net State Domestic Product in 1970-71 at 100 percent participation rate for school children in age-group 10 and above and it constitutes 4.78 percent of Net State Domestic Product at 50 percent participation rate.

3.9.3. An analysis of the cost patterns in Tamil Nadu Education reveals that the lion's share is taken by salaries to the teaching staff leaving little for other development. We could also see that private costs are comparatively less than social costs as primary education is the major responsibility in the public (State) sector.