CHAPTER -IV :

ESTIMATES OF CAPITAL

I. CONCEPTUAL PROBLEMS INVOLVED :

The term 'Capital' is associated with at least two alternative meanings when used in economic theory. On one hand, it means to represent an individual's command over financial resources, and, on the other hand, it represents one of the three most important factors of production, viz., land, labour and capital. It is the latter meaning of the term 'capital' which is directly relevant in the analysis of growth, whether of the whole economy or of the industry. Viewed from this angle, our concept of capital, used for the analysis of the growth (Chapter V) of different industries over time, and, at a particular period of time, represents 'capital' as a factor of production.

'Capital' as a factor of production is defined as a 'Produced means of production'. Thus, our concept of capital consists only of physical assets which are produced in the economy and are used for further production.

The profitability of any concern is expected to be affected greatly by the productivity of different factors of

production. The higher the productivity of any given factor, the higher would be expected the profitability of the concern. Moreover, as profit rate represents the return on investment, i.e. total capital employed or networth,[1] it is expected to be closely related to the productivity of capital. Hence, we assume some relationship to exist between profit rate and capital-output ratio, the latter being the inverse of average productivity of capital i.e. output : capital ratio. Hence the need for defining capital in terms of factor of production.

We have therefore confined our 'capital' concept to physical assets while dealing with growth-profitability analysis and discussing the relationship between profitability and capital-output ratio. This gives rise to number of problems while defining and measuring capital. This is so, because, capital goods are heterogeneous which makes their aggregation difficult. Hence, in order to get clear idea of the stock of capital existing at any period, one has to take resort to the valuation of capital. Moreover, the form that capital goods take is constantly changing with the passage of time, largely due to technological progress. Hence E.F. Denison questions, "How are these capital goods, built at different times, at different costs and with different performance characteristics, equated in the construction of the series for the value of

1 Financial Concept of Capital.

capital stock measured in constant prices?"[2] Similarly, Hashim and Dadi have summarized the problems involved in defining and measuring capital in (a) five main reasons. They are :

(a) "Capital is a composite commodity" made up of different types of capital goods - each with its own characteristics and durability;

(b) The Composition of this "composite commodity" keeps on changing over time. A machine which goes out of productive use may not necessarily be replaced by the same type of machine. It might be replaced by altogether a different type, perhaps more productive, and yet not necessarily more costly.... Thus this problem is the product of change;

(c) The future productivity of a capital asset is not exactly measurable, since a capital asset is productive over a considerable period of time and future is unpredictable. This renders utility measurement of capital goods immensely difficult;

(d) The capital stock existing at any time has no linkage with current market valuations ....

(e) The productivity of a capital asset might not remain the same over its life time. And this renders it difficult even to measure the capital with reference to its original cost.

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2 Denison, E.F.: "Why Growth Rates Differ?", Washington, The Brookings Institution, 1967, p.134.

This raises the controversy over the methods of depreciation and the concepts of replacement costs."[3]

In addition to above mentioned conceptual problems, empirical works face another set of problems arising out of inadequate or defective statistical reporting about capital, which will be discussed in the methodology of measuring capital. Our intention here is to point out the conceptual problems faced while defining capital. However, this is not the end of the problem. Even after having arrived at some agreement as to the meaning of capital in conceptual terms, we are faced with problems of measurement.

II. ALTERNATIVE METHODS OF MEASUREMENT :

A number of alternative approaches are forwarded by different economists while measuring capital. Some of them can be briefed as follows :

1. The economic theory defines value of capital as the discounted future income stream to be derived from it.[4] This is a forward looking concept because it is based on the future earning power of capital stock. This concept is a mere theoretical possibility because in real world, future cannot be predicted with precision. Hence, the discounted

3 Hashim S.R. and Dadi, M.M. : Capital-Output Relations in Indian Manufacturing (1946-64). Baroda, The M.S.University of Baroda, 1973, pp.6-7.

4 Hashim, S.R. and Dadi, M.M. : op.cit., p.7.

future income stream to be derived from any stock of capital cannot be estimated with perfect precision and it therefore need not turn out to be equal to the cost of capital stock at the end. Hence, this approach, if adopted, gives rise to host of problems and hence is dropped out.

The second approach defines capital as a quantity of labour time expended in the past i.e. the cost of producing a capital asset. This is a backward looking concept since it refers to the cost of the capital stock, when it was produced in the past. Joan Robinson, while discussing the problem of capital measurement remarks, "To treat capital as a quentity of labour time expended in the past is congenial to the production function point of view, for it corresponds to the essential nature of capital regarded as a factor of production," because, "The main purpose of the production function is to show how wages and the rate of interest are determined by technical conditions and the factor ratio."[5] This approach also faces some problems. The cost approach has a meaning corresponding to the value of asset when it was new. But when we refer to an old asset, this approach becomes less useful. If we accept that the productivity of an asset declines over time, then the only way to measure the value of an old asset is by knowing its remaining productive capacity, i.e.

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5 Robinson, J. : "The Production Function and the Theory of Capital" in Capital and Growth", edited by G.C. Harcourt and N.F. Laing, England Penguin Books Ltd., 1973, p.48.

earning power, which can be known with the help of forward looking concept of capital. We have already discarded the forward looking concept and have to discard the backward looking concept also due to these difficulties.

The third approach of measuring capital is given by a related concept known as "Replacement Cost". The replacement cost concept itself is divided in two parts : (i) replacement cost new and (ii) replacement cost written down. The former refers to the cost of a new machine of similar type while the latter refers to the concept of declining productive capacity over time. As far as the replacement cost written down is concerned, a number of problems are faced. If the valuation of these assets is left to the market forces, it requires that nearly perfect market for second hand goods exists. The selling and buying of second hand capital goods occurs under special circumstances, e.g. when assets are scrapped on account of factors like obsolescence etc. Hence, market is no guide to the value of existing old assets,[6] because we do not have a well organised and developed market for second hand capital goods. Ultimately, we are left with the replacement cost new approach.

T. Barna prefers replacement cost new to written down replacement cost, because the former concept is important in

6 Hashim S.R. and Dadi, M.M., op.cit., p.9.

a study of productive relationships. The replacement cost written down refers to declining value of assets over time due to fall in efficiency of capital asset. He disagrees to this because he argues, "It logically follows that value declines with age, partly because of falling efficiency (in an economic or in a technical sense). It logically follows that value declines faster than efficiency and indeed for important classes of assets efficiency does not decline at all. For this reason, the relationship between replacement cost new and output may be more stable than between written down replacement cost and output".[7]

III. COMPONENTS OF CAPITAL :

The term capital represents a factor of production, and therefore it consists of only physical assets which are used for further reproduction. Hence, at any moment of time capital consists of fixed assets like machines and buildings and circulating assets like consumable stores. The problem of valuation enters when we refer to the value of fixed assets only, inventories or circulating assets being measured at current cost and therefore not facing the problem of depreciation as the former assets do. However we will discuss this problem when we will come to the empirical measurement of fixed capital assets in this chapter.

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7 Barna, T. : "On Measuring Capital", in The Theory of Capital Eds.: F.A. Lutz and D.C. Hague, London, Macmillan, 1961, p.80.

However, when we face the problem of different categories of fixed and circulating assets, to be included is our capital stock, we have to give justification for doing so. Views differ in case of the inclusion of 'land' in fixed assets and 'cash and bank balances and other liquid assets' in circulating capital. We prefer to exclude both of them from our capital concept on following grounds :

Land is one of the factors of production other than 'capital', and is a free 'gift of nature'. Land to a particular firm may take the form of assets like buildings etc. because the entrepriser has to invest in land like other assets and he can discard it at his will; Inspite of this, we do not consider 'land' as capital because it is not subject to accounting procedures of depreciation like other fixed assets. Moreover, land being a free gift of nature,(for the nation as a whole) it is not a produced means of production and hence does not fit in our definition of capital. Moreover, in the manufacturing sector, land has a very limited role, i.e. that of providing space for activities, and its productivity does not matter much. Hence, it would be proper if land is not included as one of the capital assets. However, any improvement and construction over land is included in buildings category of capital asset.[8]

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8 Hashim, S.R. & Dadi, M.M. op.cit., pp.10-11.

There is a general business practice of including cash, bank balances, other liquid assets etc. in the total capital of any concern. Even in statistical reporting, these things are shown as a part of working capital. As we have already observed, only real goods, which have 'stored up values', can represent capital when used for further production. Cash etc. represent a claim against such real goods and these claims would cancel out in aggregate terms. Hence, cash etc. also do not fullfill our definition of capital and hence are not included while defining capital. In short, our capital concept, defined in terms of a factor of production, consists of physical assets which are further divided into fixed assets and circulating capital.

Fixed assets include buildings (any improvement and construction over land is included here), plant and machinery and other fixed assets and exclude land. Similarly, circulating capital includes inventories which are further classified as stock of raw materials components etc., stock of finished goods and half finished goods and work in progress and exclude cash, bank balances and other liquid assets.[9] Having decided about the components of our capital concept, we are now faced with one more problem in case of fixed assets. The problem is, which value of assets, gross fixed assets or net fixed assets, should we use while measuring capital?

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9 For details see Appendix II.I(A) at the end of Chapter II.

IV. GROSS Vs. NET FIXED ASSETS

When we reach the stage of estimating the value of capital, we have to choose between the two alternative values of fixed assets, viz., gross fixed assets ~~which~~ (gross of depreciation) or net fixed assets (net of depreciation).

The gross fixed assets represent the (purchase price) original cost of assets while net fixed assets represent an idea of declining productivity of capital over the passage of time.

However, any accounting practice used for measuring the declining productivity of an asset is simply arbitrary and misleading. Moreover, most of the empirical studies have favoured gross value of fixed assets on many grounds.

T. Barna remarks, "In most industries which are capital intensive the efficiency of plant tends to increase rather than decrease with life."[10] This is so because plants are scrapped before their efficiencing actually declines. Hence T. Barna while discussing the mortality of capital comments: "In the wider field it is obsolescence rather than wear-and-tear which is the dominant cause of mortality - homicide to make room for a new favourite, rather than natural death."[11]

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10 Barna, T.: "On Measuring Capital", in the "Theory of Capital" Eds. F.A.Lutz and D.C. Hague, London, Macmillan, 1961, p.91.

11 Barna, T. op.cit., p.85.

This indicates that assets do not fall in efficiency as fast as the accounting procedures of depreciation show.

Prof. Leontief, a great authority on Capital Coefficients, holds, "Recent information indicates that the undepreciated coefficients correspond much more closely to the incremental coefficients than do the depreciated ones. Use of the depreciated coefficients implies that capital stocks decrease in efficiency in exact relation to the depreciation charge. Most available evidence indicates that this is not a reliable assumption."[12] E.D. Domar, while estimating the capital-output ratio in USA has observed another important point that, gross investment is a major vehicle of technical progress and therefore suggests, "Hence gross figures may be more meaningful, with some unknown deduction of a smaller magnitude than conventional depreciation to account for the deterioration of existing capital."[13]

Moreover, Barna observes that even unknown deducations of smaller magnitude are not warranted because business concerns incur large amounts of expenditure in terms of

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12 Prof. Leontief : "Harvard Economic Research Project: Estimates of the Capital Stock of American Industries, 1947, Cambridge: Mass., 1953, pp.21-22".

13 Domar, E.D. : "The Capital- Output-Ratio : In the United States : Its variation and Stability" in "The Theory of Capital", op.cit., p.99.

Considering the above mentioned thoughts of experts, we feel that the productive efficiency of assets is kept intact by incurring expenditure on repairs and maintenance and hence these expenditures should be treated as reinvestment. Therefore there is no necessity for deducting depreciation from gross value.

Thus, finally we have decided to take undepreciated replacement cost new as the measure of capital in our analysis of growth and capital-output ratio. Undepreciated, i.e. gross value, is taken because productive capacity of capital can be kept intact through repairs and maintenance. Replacement cost new because we intend to put all capital assets on par with each other. The existing capital assets are purchases made at different points of time. Replacement cost new can be estimated if we have information on the original cost (Purchase price i.e. gross value) of capital asset and the changes in prices during the period under study. By converting the historical original costs into current prices, i.e. applying appropriate price indices[16] we get the replacement cost new which tells us how much it would cost to replace an old machine with a similar new one. This enables us to put on par all the capital stock and hence, enables us to formulate series of capital assets (fixed)

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16 See Hashim, S.R. and Dadi, M.M. : op.cit., pp.19-20. And see also Hoffman, W.G. in the 'Theory of Capital, op.cit., p.121.

comparable over the period in real sense. Fortunately, information on gross value of fixed assets for all the 21 manufacturing industries by categories viz., Buildings, Plant and Machinery and Other Fixed Assets are available for 25 years. This distinct advantage, as already discussed, has tempted us to prefer RBI study to ASI.

One important point to be noticed here is that RBI data on gross value of fixed assets is net of deductions on account of sales, obsolescence, etc. hence, there is no necessity to make room for discarding due to obsolescence and aging.[17]

V. CAPITAL AT PURCHASE PRICES :

The catetory-wise information on gross value i.e. purchase price, of fixed assets is available from the accounts of combined balance sheets published by RBI[18] from the year 1950-51 onwards upto 1974-75 for each of the 21 Indian Manufacturing Industries. However, no data on gross value i.e. purchase price or original cost, of these assets are available prior to 1950-51. The gross stock of capital existing in 1950-51 for each industry (separately) is acquired at different points of time since the inception of each industry till 1950-51. This raises a problem when we try to convert the historical prices of assets of each industry into replacement cost new for the year 1950-51, because, we

17 Financial Statistics of Joint Stock Companies in India 1960-61 to 1970-71, RBI, August, 1975, p.19.

18 'Financial Statistics of Joint Stock Companies in India', in 3 vols., RBI, 1967, 1975 and 1977.

do not know the extent of additions made to the stock of capital in the year 1950-51. However, as observed earlier, the gross stock of capital for each industry in 1950-51 is the accumulated stock of capital over the whole period since the inception of the industry. Hence, we can treat the existing gross capital stock of 1950-51 as an addition over the earlier period.

VI. ESTIMATES OF CAPITAL IN 21 MANUFACTURING INDUSTRIES

A. Age Profile of Fixed Assets :

Since our intention is to put the capital stock in each of 21 manufacturing industries on par over the period under study, we have to find out the replacement cost new for different categories of fixed assets for each industry separately. For estimating replacement cost new, we require to know the additions made to each category of fixed assets at purchase prices, i.e. additions to gross value of fixed assets over the period 1950-51 to 1974-75. Once, we have the addition to capital stock at purchase prices, (category-wise) for each industry for each year, we can convert these additions into current prices by using appropriate price indices. When we add-up the converted values for a particular year and for a particular category of asset, we arrive at the replacement cost new. All this procedure requires us to know "Age Profile"

of fixed assets (category-wise) because it provides us with additions made to fixed capital at purchase prices and hence allows for adjustments for price variations over time.

The data on fixed capital are given for gross fixed assets over a period of time. Hence, capital assets existing in year t would be equal to assets in existence in year t-1, (i.e. in earlier year) plus the assets added in year t. Ideally, we need datafor every category of fixed assets for each industry. However, it was possible to have three categories of capital assets from the published data, viz., Buildings, Plant and Machinery and Other Fixed Assets.[19] However, the proportion of the other fixed assets in total fixed assets being small, it was clubbed together with plant and machinery which ultimately leaves us with two categories of fixed assets viz., (1) buildings and (ii) plant, machinery including other fixed assets.

Thus, we prepared separate series of gross values of buildings and plant and machinery and other fixed assets for each industry separately for the period 1950-51 to 1974-75. Once these series of fixed assets (category-wise) are ready, we can prepare a matrix of age profile for each one of them at purchase prices.

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19 For details of these concepts please refer to Appendix II.I(A).

Table 4.1 presents the gross value of fixed assets by two categories viz., Buildings and Plant & Machinery including other fixed assets, for each industry separately, for the period 1950-51 to 1974-75.

As observed earlier, we prepared the age profile matrix for both buildings and plant & machinery (including other fixed assets) separately for each industry, treating 1950-51 stock of gross capital as an addition over earlier period since the inception of each industry and taking the increase in gross value (of each type of asset separately), from 1951-52 onwards for two consecutive years, as an addition to the stock of capital and carried it on upto 1974-75.

The age profile matrices for buildings and plant and machinery respectively for Cotton Textile Industry are presented at the end of this Chapter in Appendix IV.I and IV.II. A close look at Appendix IV.I reveals that in 1965-66, the value of buildings for Cotton Textile Industry is lower than in 1964-65, which means that there was a decrease in existing stock of buildings at purchase price in 1965-66. How do we interprete this sudden fall in the gross value of buildings? Again in 1970-71 the gross value of buildings is lower than 1969-70 value. However, there is no explanation provided for such fall in gross values of assets and hence we treat them to be the result of exceptionally large

Table 4.1 : Fixed Assets at Purchase Price (Gross Value)
By Category and Industry. (Rs. in lakhs i.e. Rs. in 100,000).

Year	Grains & Pulses			Edible Veg.& Hydr.Oils			Sugar		
	Buildings	Plant and Machinery	Total Fixed Assets	Buildings	Plant & Machinery	Total Fixed Assets	Buildings	Plant & Machinery	Total Fixed Assets
1950-51	72	153	225	172	416	588	678	2151	2829
1951-52	73	158	231	176	430	606	725	2324	3049
1952-53	73	157	230	183	443	626	780	2459	3239
1953-54	74	167	241	184	463	647	807	2600	3407
1954-55	76	172	248	191	478	669	925	2788	3713
1955-56	90	195	285	202	526	728	1150	3755	4905
1956-57	141	224	365	215	542	757	1278	4543	5821
1957-58	146	236	382	219	567	786	1386	5103	6489
1958-59	152	244	396	227	602	829	1487	5478	6965
1959-60	152	255	407	232	643	875	1587	5850	7437
1960-61	134	206	340	292	796	1088	1743	6603	8346
1961-62	124	228	352	309	899	1208	1925	7139	9064
1962-63	139	235	374	284	919	1203	2034	7598	9632
1963-64	145	244	389	293	941	1234	2139	7892	10031
1964-65	159	263	422	363	1022	1385	2184	8560	10744
1965-66	171	254	425	276	974	1250	1969	8201	10170
1966-67	189	276	465	299	1069	1368	2082	8863	10945
1967-68	198	307	505	334	1199	1533	2232	9704	11936
1968-69	206	317	523	360	1304	1664	2311	10327	12638
1969-70	212	330	542	409	1522	1931	2425	11348	13773
1970-71	197	294	491	286	1375	1661	2587	12624	15211
1971-72	200	308	508	301	1494	1795	2717	13190	15907
1972-73	225	357	582	308	1540	1848	2874	14091	16965
1973-74	232	404	636	322	1683	2005	3038	15322	18360
1974-75	240	432	672	371	1999	2370	3263	17156	21019

Table 4.1 (contd.)

Year	Tobacco			Cotton Textiles			Silk-Rayon and Woollen Textiles		
	Build-ings	Plant & Ma-chi-nery	Total Fixed Assets	Build-ings	Plant & Ma-chi-nery	Total Fixed Assets	Build-ings	Plant & Ma-chi-nery	Total Fixed Assets
1950-51	72	106	178	3371	9288	12659	218	612	830
1951-52	80	122	202	3532	10004	13536	266	702	968
1952-53	87	138	225	3660	10981	14641	291	837	1128
1953-54	98	145	243	3854	11928	15782	331	1002	1333
1954-55	98	150	248	4056	12730	16786	371	1116	1487
1955-56	235	432	667	4687	15492	20179	510	1636	2146
1956-57	255	506	761	5084	17464	22548	568	1988	2556
1957-58	274	597	871	5403	19567	24970	622	2243	2865
1958-59	286	635	921	5679	21107	26786	664	2338	3002
1959-60	302	669	971	5907	22718	28625	715	2456	3171
1960-61	312	697	1009	7320	29400	36720	954	3288	4242
1961-62	326	765	1091	7717	32885	40602	1117	4544	5661
1962-63	360	811	1171	8385	36902	45287	1335	5056	6391
1963-64	378	840	1218	8951	41420	50371	1459	5472	6931
1964-65	395	886	1281	9879	45686	55565	1596	5898	7494
1965-66	408	941	1349	9349	43519	52868	2612	9971	12583
1966-67	435	1013	1448	10002	48579	58581	2775	11398	15173
1967-68	448	1092	1540	10430	52407	62837	3044	12946	15990
1968-69	458	1197	1655	10757	54802	65559	3263	14544	17807
1969-70	471	1336	1807	11269	57592	68861	3522	16307	19829
1970-71	576	1784	2360	10517	55692	66209	3348	15703	19051
1971-72	618	2141	2759	11008	59423	70431	3679	17159	20838
1972-73	634	2440	3074	11697	65039	77736	3921	19184	23105
1973-74	690	2927	3617	12137	70945	83082	4134	22098	26232
1974-75	844	3462	4306	13220	77802	91022	4720	29308	34028

Table 4.1 (contd.)

Year	Medicines & Pharmaceutical preparations			Matches			Pottery, China Earthern ware and Structural Clay Products		
	Buildings	Plant & Machinery	Total fixed Assets	Buildings	Plant & Machinery	Total Fixed Assets	Buildings	Plant & Machinery	Total Fixed Assets
1950-51	95	123	218	67	146	213	91	158	249
1951-52	100	138	238	72	151	223	94	171	265
1952-53	104	152	256	79	163	242	99	186	285
1953-54	105	162	267	85	193	278	103	193	296
1954-55	108	174	282	97	229	326	107	200	307
1955-56	136	210	346	101	236	337	167	276	443
1956-57	142	229	371	104	245	349	169	299	468
1957-58	151	253	404	110	309	419	199	351	550
1958-59	167	295	462	141	335	476	223	409	632
1959-60	183	341	524	150	346	496	234	446	680
1960-61	441	950	1391	152	356	508	328	737	1065
1961-62	546	1198	1744	156	376	532	345	784	1129
1962-63	698	1424	2122	164	384	548	368	869	1237
1963-64	792	1690	2482	176	401	577	399	954	1353
1964-65	871	1907	2778	192	417	609	414	1007	1421
1965-66	1336	2977	4313	204	439	643	588	1547	2135
1966-67	1427	3415	4842	210	475	685	607	1636	2243
1967-68	1629	3931	5560	220	520	740	639	1758	2397
1968-69	1816	4370	6186	232	559	791	662	1842	2504
1969-70	1945	4844	6789	233	620	853	715	1962	2677
1970-71	2170	6099	8269	NA	NA	NA	649	1787	2436
1971-72	2492	6951	9443	NA	NA	NA	687	1909	2596
1972-73	2789	7525	10314	NA	NA	NA	735	2067	2802
1973-74	2943	8358	11301	NA	NA	NA	784	2363	3147
1974-75	3208	9180	12388	NA	NA	NA	877	2687	3564

Table 4.1 (contd.)

Year	Paper & Paper Products *			Iron & Steel			Aluminium		
	Buildings	Plant & Machinery	Total Fixed Assets	Buildings	Plant & Machinery	Total Fixed Assets	Buildings	Plant & Machinery	Total Fixed Assets
1950-51	292	1014	1306	647	4521	5168	107	294	401
1951-52	316	1116	1432	661	4623	5284	112	318	430
1952-53	341	1224	1565	729	4996	5725	132	344	476
1953-54	379	1374	1753	862	5594	6456	138	417	555
1954-55	415	1495	1910	901	6470	7371	156	473	629
1955-56	595	2094	2689	1808	7476	9284	234	589	823
1956-57	627	2410	3037	2277	10226	12503	243	633	876
1957-58	738	3068	3806	2427	16873	19300	295	848	1143
1958-59	864	3438	4302	2536	20769	23305	386	1027	1413
1959-60	892	3731	4623	2886	22138	25024	400	1072	1472
1960-61	1104	4739	5843	3002	23477	26479	417	1079	1496
1961-62	1195	5460	6655	3056	24093	27149	495	1787	2282
1962-63	1252	6224	7476	3139	24788	27927	528	1999	2527
1963-64	1388	8114	9502	3219	25301	28520	576	2260	2836
1964-65	1560	9095	10655	3338	25798	29136	664	2551	3215
1965-66	2111	11418	13529	3514	26779	30293	1415	5959	7374
1966-67	2276	12969	15245	3635	30300	33935	1669	7886	9555
1967-68	2395	13800	16196	3711	32533	36244	1689	8730	10419
1968-69	2554	14604	17158	3733	33506	37239	1919	9604	11523
1969-70	2761	15222	17983	4146	34521	38667	2286	10726	13012
1970-71	2926	16711	19643	4091	37169	41260	2009	12333	14342
1971-72	3113	17983	21096	4158	39257	43415	2369	12552	14921
1972-73	3349	19960	23309	4330	42048	46378	2517	13821	16338
1973-74	3544	22047	25591	4430	44737	49167	2648	13851	16499
1974-75	3906	25170	29076	4657	48034	52691	2800	15351	18151

Table 4.1 (contd.)

Year	Basic Industrial Chemicals			Cement			Transport Equipment		
	Buildings	Plant & Machinery	Total Fixed Assets	Buildings	Plant & Machinery	Total Fixed Assets	Buildings	Plant & Machenry	Total Fixed Assets
1950-51	251	802	1053	531	1626	2157	204	413	617
1951-52	265	833	1098	578	1792	2370	218	448	666
1952-53	296	887	1183	610	2001	2611	231	476	707
1953-54	281	956	1237	656	2195	2851	248	538	786
1954-55	294	1024	1318	747	2427	3174	256	614	870
1955-56	329	891	1220	926	3286	4212	825	1607	2432
1956-57	363	985	1348	1046	3948	4994	996	1995	2991
1957-58	411	1171	1582	1266	4594	5860	1121	2571	3692
1958-59	541	1739	2280	1453	5457	6910	1203	3221	4424
1959-60	609	2080	2689	1558	6106	7664	1313	3832	5145
1960-61	1248	3936	5184	1720	6822	8542	1825	4934	6759
1961-62	1544	5251	6795	1853	7090	8943	2118	5792	7910
1962-63	1788	6848	8636	2042	7676	9718	2509	6828	9337
1963-64	2055	8366	10451	2062	8689	10751	2735	8839	11574
1964-65	2451	9258	11709	2414	9252	11666	3216	10629	13845
1965-66	3276	11941	15217	2679	9848	12527	4066	13675	17741
1966-67	3487	15864	19351	2890	11137	14027	4548	18211	22759
1967-68	3768	18121	21889	3265	12389	15654	4912	20740	25652
1968-69	5288	20478	25766	3714	14354	18068	5327	21991	27318
1969-70	6302	23425	29727	3826	16004	19830	5684	23626	29310
1970-71	7279	47021	54300	4043	18196	22239	5366	24114	29480
1971-72	8097	52161	60258	4206	18917	23123	5729	25704	31433
1972-73	8798	57495	66293	4319	19608	23927	6170	28008	34178
1973-74	9223	63245	72468	4435	20067	24502	6723	30961	37684
1974-75	9847	67806	77653	4519	21507	26026	7383	34991	42374

Table 4.1 (contd.)

Year	Electrical Machinery, Apparatus & Appliances			Machinery, (Other than Transport etc.)			Ferrous/Non-Ferrous Metal Products		
	Buildings	Plant & Machinery	Total Fixed Assets	Buildings	Plant & Machinery	Total Fixed Assets	Buildings	Plant & Machinery	Total Fixed Assets
1950-51	117	239	356	722	1424	2146	28	87	115
1951-52	116	233	349	813	1660	2473	31	97	128
1952-53	146	284	430	845	1842	2687	36	110	146
1953-54	160	316	476	921	2018	2939	38	120	158
1954-55	174	356	530	996	2181	3177	39	131	170
1955-56	200	584	784	949	2345	3294	41	121	162
1956-57	225	693	918	1101	2676	3777	47	137	184
1957-58	278	794	1072	1283	3129	4412	51	158	209
1958-59	318	934	1252	1419	3709	5128	52	165	217
1959-60	335	1112	1447	1592	4186	5778	56	172	228
1960-61	738	2227	2965	1227	3112	4339	1065	3087	4152
1961-62	786	2602	3388	1500	3849	5349	1176	3402	4578
1962-63	937	2927	3864	1652	4526	6178	1222	3782	5004
1963-64	1100	3484	4584	1748	5099	6847	1338	4193	5531
1964-65	1314	4311	5625	1961	5816	7777	1483	4558	6041
1965-66	2511	7090	9601	3155	8192	11347	2140	6420	8560
1966-67	2846	8954	11800	3429	9713	13142	2363	7741	10104
1967-68	3130	10190	13320	3664	10931	14645	2525	8532	11057
1968-69	3377	11067	14444	3818	11652	15470	2631	9208	11839
1969-70	3633	11887	15520	4078	12500	14578	2771	9767	12538
1970-71	4613	16268	20881	5472	17260	22732	2536	8919	11455
1971-72	4954	17741	22695	5825	18747	24572	2957	9667	12424
1972-73	5258	19401	24659	6291	20647	26938	2945	10389	13334
1973-74	5660	21065	26725	6742	22653	29395	3116	11213	14329
1974-75	6116	23423	29539	7644	25759	33403	3305	12577	15882

Table 4.1 (contd.)

Year	Jute Textiles			Other Chemical Products			Rubber & Rubber Products		
	Buildings	Plant & Machinery	Total Fixed Assets	Buildings	Plant & Machinery	Total Fixed Assets	Buildings	Plant & Machinery	Total Fixed Assets
1950-51	1776	3425	5201	38	86	124	121	205	326
1951-52	1801	3517	5318	45	98	143	142	231	373
1952-53	1824	3571	5395	46	104	150	166	258	424
1953-54	1845	3670	5515	47	110	157	187	284	477
1954-55	1865	3930	5795	47	115	162	193	309	502
1955-56	2130	4702	6832	165	298	463	205	348	552
1956-57	2152	5043	7195	188	390	578	212	391	603
1957-58	2146	5376	7522	190	418	608	241	462	703
1958-59	2136	5653	7789	196	450	646	273	660	933
1959-60	2057	6014	8071	210	496	706	294	738	1032
1960-61	1923	5860	7783	227	549	776	378	1071	1449
1961-62	1948	6263	8211	267	611	878	444	1410	1854
1962-63	2107	7104	9211	301	669	970	473	1542	2015
1963-64	2301	8193	10494	354	731	1085	510	1701	2211
1964-65	2454	9047	11501	407	844	1251	557	1923	2480
1965-66	2022	7787	9809	1115	2346	3461	758	2885	3643
1966-67	2102	8270	10372	1259	2824	4083	804	3189	3993
1967-68	2165	8687	10852	1288	3407	4695	846	3490	4336
1968-69	2249	9291	11540	1378	3781	5159	877	4006	4883
1969-70	2310	9855	12165	1444	4125	5569	1067	4484	5551
1970-71	2548	11086	13634	1855	5493	7348	1223	5127	6350
1971-72	2612	11604	14216	1993	5915	7908	1418	7186	8604
1972-73	2729	12350	15079	2633	7121	9754	1513	7886	9399
1973-74	2787	13076	15863	2776	7759	10535	1669	8433	10102
1974-75	3087	14228	17315	2885	8624	11509	2193	9053	11246

Note to Table 4.1

Source : "Financial Statistics of Joint Stock Companies in India", in 3 vols, 1967, 1975 and 1977, RBI.

Notes :

1. Gross value indicates assets at Original Cost i.e. Purchase Price which is gross of depreciation.

2. In case of Pottery etc. Industry, data for land and buildings are combined for the period 1950-51 to 1954-55. However, from 1955-56 onwards separate data on these two are available. So we have worked out the ratio between land & buildings for the year 1955-56 for this industry and have separated the combined data on these two for the years 1950-51 to 1954-55 by applying this ratio.

3. Capital-work-in progress in included in Plant & & Machinery & Other Fixed Assets. Similarly Other Fixed Assets are also included in Plant and Machinery

discarding of old assets. Thus we put zero in the cell of 1965-66 and 1970-71 in Appendix IV.I indicating that additions in these two years to gross values of buildings were zero. Further, we calculate the differences in the gross value of buildings in between 1964-65 and 1965-66 and between 1969-70 and 1970-71. Then we first subtract the former difference from the figure of 1950-51 which is carried forward upto 1964-65 and put the remaining figure in year 1965-66 and carry forward the same upto 1969-70. Again in 1970-71 we put the figure after subtracting the latter difference and carry it forward upto 1974-75. For example, the value of buildings in 1950-51 in Cotton Textile Industry (see Appendix IV.I) was Rs.3371 lakhs and is carried forward upto 1964-65. From 1965-66 upto 1969-70 this value deciines (difference of Rs.530 lakhs between gross value of buildings of 1964-65 and 1965-66) to Rs.2841 lakhs and falls further to Rs.2089 lakhs in 1970-71 (i.e. a fall of Rs.752 lakhs in gross value of building between 1969-70 and 1970-71). Moreover the additions in 1965-66 and 1970-71 assume zero values in their respective cells. Similar assumption of extraordinary discarding has been adopted for both the types of assets while preparing age profile matrix for each industry separately. Appendix IV.II which reveals the age profile matrix for plant and machinery (including other fixed assets) also indicates that additions

to these assets in 1965-66 and 1970-71 were nil and hence we have put zero in the cells for these years' additions, and adopted the similar method as explained above.

Since we have followed the similar method for both the types of assets for each industry separately, we have presented here only one case of Cotton Textile Industry. However, we feel it necessary to indicate the exceptional years for each industry and for each category of asset when there are negative values due to exceptional discarding. However, we fail to find any other explanation, for them.

Appendix IV.III reveals that the most common years of exceptional discarding i.e. negative additions, in assets were 1960-61, 1965-66 and 1970-71. We have treated all the above years of exceptional discarding as negative additions and have adopted the above mentioned method in preparing age profile matrix for both types of assets at purchase price for each industry. One important point to be observed from ~~above~~ this table is that Medicines and Pharmaceutical Preparations, Matches, Cement, Rubber & Rubber Products and Paper & Paper Products had no cases of exceptional discarding for both the types of assets.

Before we discuss about the capital stock at current prices we feel it necessary to point out that the R.B.I. data on capital stock at purchase prices of industry relates to

different number of companies over time. This is so because every five years, (i.e. 1955-56, 1960-61, 1965-66, 1970-71), RBI data incorporates more and more number of companies. This implies that the capital stock at purchase prices (for each industry separately) for every five years comprises of certain number of companies (e.g. for the period 1950-51 to 1954-55) while in new series (i.e. 1955-56 to 1959-60 and so on) it belongs to increased number of companies. Hence there appears to be a sudden jump in capital stock in these years e.g. 1955-6 over 1954-55, 1960-61 over 1959-60 etc. The problem that is faced here is, how do we treat the additions to capital stock in these years? (i.e. 1954-55 and 1955-56) However, the additions of companies in the same industry in every five years relates only to those companies which went into production during the 5 year period preceding the commencement of new series (i.e. 1950-51 to 1954-55 here) However, we have no information on the exact year of commencement of production. Hence we treat the whole of addition as an addition of 1955-56 over 1954-55 and so on.

B. Age Profile at Current Prices

Having prepared the age profile matrix of buildings and plant and machinery (including other fixed assets) at gross values (purchase prices) for each of the 21 manufacturing industries for 25 years' period, we are required to convert these values at current prices. The need for converting

these values (additions) from purchase prices to current prices arises because fixed assets are purchased at different points of time. Hence these values cannot be added unless they are converted at current prices. In other words we intend to adjust annual additions to gross values of fixed assets for changes in prices in order to express different components of the total stock of capital existing in any year in terms of one set of consistent prices, which makes the aggregation of these values justifiable. This makes the excercise of conversion of purchase prices (gross value) into current prices inevitable.

For expressing the fixed assets at current prices we are required to adjust the additions made in each year to these assets (separately) with appropriate price indices for the respective years.

We have applied the construction prices index for buildings while machinery and equipment price index for plant machinery including other fixed assets for the year 1950-51 to 1974-75. As far as the period 1950-51 to 1959-60 is concerned, both these types of price indices are available in Reserve Bank of India Bulletin of January 1963,[20] while for the period 1960-61 to 1974-75 we have depended upon the implicit price deflator[21] of Gross Domestic Capital Formation

20 RBI Bulletin, Jan. 1963, pp.17-19.

21 White Paper on National Income (i.e. National Accounts Statistics), 1960-61 to 1974-75, Central Statistical Organisation, Oct. 1976.

at current and constant prices.

The price index of construction has been worked out with the help of index numbers of wholesale prices of cement, iron & Steel, Manufactures, logs and timber, bricks & tiles, lime, sand and index number of wage rates of rural skilled workers, with the weights assigned to these as 10, 12, 12, 11, 15, 15, and 25 respectively. These weights are based on RBI construction of price index number which are derived from Blue Book on Capital Formation.

The price index of machinery and equipment for the period 1950-51 to 1959-60 has been compiled by using the index number of wholesale prices of 'machinery & transport Equipment' (only machinery for the year 1950-51).[22] Both these indices i.e. construction and machinery & Equipment index, are derived from Blue Book on Capital Formation and are reproduced in Investment Cost Index Table in RBI Bulletin of 1963.

We have adopted the similar method[23] for deriving both the prices indices for the period 1960-61 to 1974-75. Hence, for the period 1960-61 to 1974-75 we have relied upon the implicit price indices incorporated in the estimates of Gross Domestic Capital Formation in Construction and Plant & Machinery at current and constant prices. When we divide the gross domestic capital formation at current prices by the gross

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22 RBI Bulletin, op.cit., pp.17-19.

23 RBI Bulletin, op.cit., p.17.

domestic capital formation at constant prices, we derive the implicit price deflator.

The estimates on gross domestic capital formation by asset type at current and constant prices (1960-61 prices) have been prepared following generally the methodology described in the earlier publications on the subject,[24], viz., Brouchure on Revised Survey of National Product 1960-61 to 1964-65 (CSO 1967) Estimates of Saving in India 1960-61 to 1965-66 (1969) and Estimates of Capital Formation in India: 1960-61 to 1965-66 (1969)[25]. Estimates of domestic capital formation at current prices have been converted into 1960-61 prices by making use of appropriate deflators for construction, machinery and equipment and change in stocks. The different inputs used in preparation of deflators for various types of construction were Cement, Iron & Steel, Bricks & Tiles, Logs & Timber, Glass Lime, Electric Goods and Labour and these have been given different weights according to the values of quantities used in construction.[26]

Estimates of machinery and equipment have been deflated on the basis of the Economic Adviser's Index Number of wholesale prices for the group "machinery and transport equipment.[27]

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24 White Paper on National Income: Op.cit., Notes on Methodology, pp.152-155.

25 Blue Book on Capital Formation, National Income Statistics, Estimates of Capital Formation in India: 1960-61 to 1965-66 (CSO, 1969).

26 Vide - Blue Book on Capital Formation: op.cit., Appendix 1.6,p.24.

27 Vide- Blue Book on Capital Formation, op.cit., p.24.

Thus we have derived the construction and machinery and equipment price indices for the whole period 1950-51 to 1974-75 with 1960-61 as the base year. (1960-61=100). However, our intentions in under-going whole this exercise are of estimating the real growth of capital in each industry and to estimate the capital output ratio for each industry over the period under study. This requires to change the base year taken for price indices and hence we expressed our construction & machinery &equipment price indices with taking 1950-51 as the base year, simply by changing the base year from 1960-61 to 1950-51.

Once we are ready with Construction price index and Machinery & Equipment price index for the period 1950-51 to 1974-75 (with 1950-51=100), We have to apply them to buildings and plant equipment (including other fixed assets) respectively and express the additions to each type of asset in each year at current prices. The Construction Cost and Machinery & Equipment price indices (along with price indices for Industrial Raw Materials & Finished Products)are given in Table 4.2.

When we come to this stage, we are faced with one more problem, and that is of 1950-51 additions to stock of capital. We have already observed that for each industry, the stock of Buildings & Plant & Machinery (including other fixed assets) in 1950-51 is treated as an addition over the earlier period, i.e. right from the inception of each industry upto 1950-51.

Table 4.2 : Whole Sale Price Indices for Various Types of Capital Goods (1950-51=100)

Year	Construction	Machinery & Equipment	Inventories	
			Ind.Raw Material	Finished Products
1950-51	100.0	100.0	100.0	100.0
1951-52	99.6	114.2	113.1	114.9
1952-53	100.7	123.0	76.4	98.2
1953-54	101.2	120.5	82.0	98.9
1954-55	101.4	119.3	77.8	98.3
1955-56	103.2	119.8	75.6	97.8
1956-57	108.6	121.7	86.6	103.7
1957;58	114.3	125.2	89.0	106.3
1958-59	119.1	127.8	88.3	106.2
1959-60	118.6	130.8	94.5	109.3
1960-61	124.7	137.6	111.1	120.6
1961-62	131.2	141.0	108.9	122.4
1962-63	136.2	144.7	104.3	124.9
1963-64	139.0	156.5	106.6	127.4
1964-65	145.5	158.0	123.9	132.4
1965-66	156.5	167.8	144.5	142.8
1966-67	167.6	195.6	174.7	153.3
1967-68	177.3	201.4	167.4	155.1
1968-69	187.3	203.4	170.1	160.2
1969-70	201.7	203.7	196.2	170.7
1970-71	214.8	220.1	214.9	182.6
1971-72	228.1	229.3	208.1	195.7
1972-73	239.5	246.8	221.6	205.6
1973-74	267.6	274.1	326.0	233.0
1974-75	327.3	360.0	357.3	292.0

Source: (i) For years 1950-51 to 1959-60, we have depended upon Investment Cost Index and Machinery and Equipment Price Index published in RBI Bulletin of Jan.1963, p.19. For the Construction cost Index & Machinery & Equipment Price Index, for the years 1960-61 to 1974-75 these two indices are derived from implicit price deflators in Gross Domestic Capital Formation at Current and Constant Prices published in White Paper on National Income.
(ii) Indices of Industrial Raw Materials and Finished Products for whole-sale price are taken from RBI Reports on Currency & Finance.

In other words, capital stock in 1950-51 was accumulated over the period, hence, these are the additions to capital stock prior to 1950-51. We assume it this way because the age profile (year-wise additions) of these assets are not available for the earlier period. We therefore assume the accumulated stock of capital to be addition of earlier period. Therefore, in order to convert the value of these additions at current prices, we need some average of price indices over the relevant time periods. This means that the older the industry, larger would be the time period involved in accumulation of stock of these assets. Hence, when we convert the accumulated stock of 1950-51 assets (each separately) for different industries we have to make use of price indices averaged over different number of years. Hence the need for finding out the inception of each industry. However, it was assumed that during the time of depression (after the industry has come into existence) there were negligible additions to the capital stock[28] and such years were dropped while averaging the price index. Moreover, whenever we were unable, to trace the exact inception year of the industry, we have taken the expansion period of the industry as indicative of majority of additions to these assets and the earlier period price indices are averaged accordingly.

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28 Hashim, S.R. and Dadi, M.M. : op.cit., p.20.

Another problem we face here is that of non-availability of both the construction & machinery & equipment price indices for earlier periods, which are traced back upto 1875 in case of industries like Cotton & Jute Textiles.

However, M. Mukherjee[29] has provided a price-index series for India for more than 100 years (from 1848 to 1957). In absence of any other alternative price indices we feel that the manufacturing price index provided by M. Mukherjee can be taken as a proxy for both buildings & plant and machinery (including other fixed assets) for the earlier period, while averaging the price index for each type of asset for each industry. Moreover, K.A. Antony[30] has observed that price index series for manufacturing goods has been found in agreement with the price index of imported capital goods (Mainly machines). This also indicates that in absence of any other alternative, the price index of manufacturing goods is the only Index which can represent machinery & equipment. However, we have used the same index for buildings also due to our inability in getting any better proxy index. This implies that construction cost index as well as machinery & equipment in the year to 1950-51 moved in the same manner as the price index of manufacturers.

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29 Mukherjee, M.: National Income of India: Trends and Structure, Statistical Publishing Society, Calcutta, 1969, p.94.

30 Antony, K.A.: "Stock of Industries Capital in India", In papers on National Income and Allied Topics, Vol.II, ed.by V.K.R.V. Rao and Others, Asia Publishing House, Bombay, 1962, p.65.

We have given the construction and machinery and equipment price indices used in conversion of gross values into current prices in Table 4.2. Since the average price indices used for converting additions upto 1950-51 at 1950-51 prices for both these assets differ industry-wise, we thought it useful to briefly present the average period considered for appropriate accumulation of capital stock of each industry in Table 4.3.

As has been observed earlier, our universe comprises of industries having different age structure. Hence the need for using price indices averaged over appropriate time periods, for eachof the industry. The decision about the average period to be taken depended upon either the date of inception or the real expansion of the industry. Considering this the period for averaging price index for Grains & Pulses, Edible Vegetable and Hydrogenated Oils, and Iron & Steel[31] industries was taken from 1915-1929 and 1940- 1950-51 i.e. 26 years because industries experienced real growth in this period. The period 1929 to 1939 beging a period of great depression is not considered while averaging the price index. The average price index for this period turns out to be 49.7 (with base year 1950-51).

31 Ghosh, Biswanath : "The Changing Profile of India's Industrial Economy", The World Press Pvt.Ltd., Calcutta, 1974, p.33, see also Agrawal, A.N.: 'Indian Economy' V. Kag Publishing House Pvt. Ltd., 1977, p.388 and p.401. Also see, Kuchhal, S.C. : Industrial Economy of India, Chaitanya Publishing House, Allahabad, 1978, pp.28-32.

Table 4.3 : Period of Additions to Capital Stock and Average Price Index Before 1950-51 by Industry

Sl. No.	Industry	Period		Average Price Index(1950-51=100)
1.	Grains & Pulses	1915-1929 and 1940-1950	26 years	49.7
2.	Edible Vegetables and Hydrogenated Oils	1915-1929 and 1940-1950	26 years	49.7
3.	Sugar	1940-1950	11 years	64.00
4.	Tobacco	1940-1950	11 years	64.00
5.	Cotton Textiles	1880-1893, 1905-1939 1940-1950	50 years	34.5
6.	Silk-Rayon & Woollen Textiles	1940-1950	11 years	64.00
7.	Medicines & Pharmaceutical Preparations.	1940-1950	11 years	64.00
8.	Matches	1920-1929, 1940-1950	21 years	52.7
9.	Pottery, China Earthernware and Structural Clay Products	1920-1929, 1940-1950	21 years	52.7
10.	Paper & Paper Products	1924-1929, 1940-1950	17 years	54.6
11.	Iron & Steel	1915-1929, 1940-1950	26 years	49.7
12.	Aluminium	1940-1950	11 years	64.0
13.	Basic Industrial Chemicals	1940-1950	11 years	64.00
14.	Cement	1920-1929, 1940-1950	21 years	52.7
15.	Transport & Equipment	1940-1950	11 years	64.00

cont...

Table 4.3 (contd.)

Sl. No.	Industry	Period		Average Price Index(1950-51=100)
16.	Electrical Machinery Apparatus & Appliances	1940-1950	11 years	64.0
17.	Machinery(Other than Transport etc.)	1940-1950	11 years	64.00
18.	Ferrous/Non-Ferrous Metal Products	1945-1950	6 years	82.3
19.	Jute Textiles	1880-1893, 1905-1939 and 1940-1950	50 years	34.5
20.	Other Chemical Products	1945-1950	6 years	82.3
21.	Rubber & Rubber Products	1940-1950	11 years	64.0

Note: These estimates are derived on the basis of the Manufacturing Price Index presented by M. Mukherjee in National Income of India: Trends & Structure, Statistical Publishing Society, Calcutta, 1969, p.94.

The period covered for the industries like Sugar, Tobacco, Silk-Rayon & Woollen Textiles, Aluminium, Transport Equipment, Electrical Machinery - Apparatus & Appliances, Machinery (Other than Transport, etc.), Basic Industrial Chemicals, Medicines & Pharmaceutical Preparations and Rubber & Rubber Products cover 11 years from 1940 to 1950-51. This period covers majority of industries, i.e. 10 because it was during and after World War II that the majority of Indian Industries received powerful impetus. Sugar industry had its beginning in 1931-32

when it received protection from government.[32] However, 1929 to 1939 being a depression period, we have dropped that period and hence used the period from 1940 onwards for averaging the price index. The Second World War and the inflationary and scarcity conditions which followed gave a considerable fillup to industries like Light Engineering, Chemicals and Pharmaceuticals[33] and gave rise to whole range of new industries like mechanical industries like machine-tools, general engineering, electrical engineering, chemical industries, non-ferrous metals, etc.[34]

Rubber & Rubber Products[35] industry had its expansion during World War II, though the first Rubber Factory was established in 1921 at Bengal. Similarly Tobacco[36], and Silk-Rayon & Woollen Textiles Industries had their expansion during this period and therefore manufacturing price index for these industries is averaged for the period 1940 to 1950-51. Similarly, the new start of non-ferrous metals industry during this period resulted into expansion of Aluminium industry for

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32. Agrawal, A.N.: op.cit., p.417.

33 Ghosh, B. : op.cit., p.33

34 Ghosh, B. : op.cit., p.25, see Kuchhal, S.L.: op.cit., pp.31-32.

35 Ministry of Food & Agriculture, Directorate of Economics & Statistics : "Rubber in India", 1956, Introductory Notes.

36 Ministry of Food & Agriculture, Directorate of Economics & Statistics: "Tobacco in India", 1955-56, Introductory Notes.

which also we have used the same period. The average manufacturing price index turns out to be 64.0 for this period.

The Cotton & Jute Textiles Industries are very old industries and had their inception in the 19th century i.e. 1818 and 1855 respectively. Even though the first cotton mill was started as early as 1818, the real development came after 1851. However, the progress of the industry was very low upto 1861 and only a dozen mills were in existence. Due to high prices of raw cotton as a result of American Civil War and the then prevailing trade depression in Bombay made the decade 1860-70 non-conducive to cotton textiles industry. The number of cotton mills in existence in Bombay were 18 and in Bengal 2 (in 1872-73). However, the termination of American Civil War and the restoration of trade confidence resulted in great increase in the number of mills to 62 in 1882 and 144 in 1895 i.e. more than 3 times and 7 times of 1872-73 respectively. Thus the progress of Cotton Textiles industry, though was not very rapid, was steady and continuous since 1880 upto 1894. However, again during the period 1895 to 1905, the Cotton Textiles industry faced the terrible depression conditions, after which the prosperity of industry set in.

The second old Indian Industry is Jute Textiles industry. The manufacture of jute with the help of machinery had its start in 1855. In 1882, there were 20 jute mills in India.[37]

37 Ghosh, B.: op.cit., pp.19-21.

Considering all these events, we felt that the real growth of both the Cotton & Jute Textile industries can be traced back around the period 1880. Further, as mentioned earlier, the depression years also were to be dropped and this left us with the time period of 50 years over the period 1880 to 1893, 1905 to 1929 and 1940 to 1950. The price index averaged over these years turns to be 34.5.

The period for averaging price index for the industries like Matches, Cement, Pottery-China, Earthenware and Structural Clay Products was taken around 21 years i.e. 1920 to 29 and 1940 to 1950.

The Matches[38] and Pottery[39] industry though had an earlier start, did really develop after the end of first world war i.e. 1920. The Cement[40] Industry had an humble beginning in 1914 at Porbandar and had real growth after 1920 i.e. after World War Ist. Considering these points the above mentioned period of 21 years after World War Ist was considered to be appropriate for averaging the manufacturing price index for these 3 industries, the average manufacturing price industry being 52.7.

The industries like Ferrous/Non-Ferrous Metal Products and Other Chemical Products had their inception during Second World War and expanded in boom period after World War II. Hence

38 Kuchhal, S.C.: op.cit., p.31.
39 Ministry of Industry: "Demand & Supply Panel on Glass Industry", 1948.
40 Dalmia, V.H.: "Cement Set for Big Stride" in 'A Profile of Indian Industry," ed. Vadilal Dagli, Vora & Vora Publishers Pvt.Ltd., 1970, pp.87-91.

the average period for price index has been taken over the period 1945 to 1950 i.e. 6 years with average manufacturing price index being 62.3.

The Paper & Paper Product industry was established in India during the last quarter of 19th century. However, it was after World War II, that the expansion of the industry took place due to the Tariff Protection of 1925.[41] Hence the period for averaging manufacturing price index for this industry covers the years 1924 to 1929 and 1940 to 1950, i.e. 17 years, the average price index number being 54.6. (The Manufacturing Price Index has been worked out with base year 1950-51=100).

Having thus decided about the period for averaging manufacturing price index for each industry, we can convert the additions of every cell of the Buildings and Plant and Machinery (including other fixed assets) matrices at purchase prices into current prices by multiplying each cell by appropriate price indices. Thus, the new matrices that we would derive would give usage profiles of buildings and plant & machinery (including other fixed assets) at current prices (for each industry separately). We can express this method symbolically as follows :

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41 Association of Indian Trade and Industries (AITA): 'Financial Trends in Paper Industry', 1957, See also Agrawal, A.N. op.cit. p.388.

$$K_{tj} = \sum_{i=1}^{25} A_{ij} \left(\frac{P_t}{P_i} \right) ;$$

where, K_{tj} indicates the value of accumulated capital assets in i^{th} year in t^{th} year's prices (current prices) for j^{th} industry. A_{ij} is the addition to capital stock of j^{th} industry in i^{th} year; P_t and P_i are the price indices in t^{th} year and in i^{th} year respectively.

Appendix IV.IV and IV.V at the end of this chapter give the matrices of age profile for (i) buildings and (ii) Plant and machinery (including other fixed assets) at current prices respectively for Cotton Textiles Industry e.g. additions to buildings in Cotton Textile Industry till 1950-51 was of Rs.3371 lakhs; (See Appendix IV.I) therefore, buildings in 1950-51 at 1950-51 prices were worth the value of $3371 \times \frac{100.00}{34.50} = 9773$ lakhs of Rs. (See Appendix IV.IV).

Thus, we have constructed the value of fixed capital stock at purchase prices, and at current prices. We have undertaken the whole of this exercise because we intend to relate the growth of stock of capital of the industry to its profitability over time as well as inter industry relation between the two at a given point of time. Secondly, we intend to explain inter-industry variations in profit rates and over time for each industry with the help of capital output ratio. Hence the need for obtaining the capital series over

the whole period with consistent values. The need for measuring capital at current prices arises because assets are purchased at different points of time which makes aggregation of values unjustifiable. However, conversion of these into current prices is done with one set of consistent prices and makes aggregation possible. The conversion of gross value of capital assets into current prices makes the construction of matrix of age profile of assets inevitable. Hence, the necessity of under-going the whole exercise.

However, when we come to the analysis of the growth profitability relationship, we have to go one step further and that is of expressing the capital assets of both the types at constant prices by using appropriate price indices. Thus we have further constructed the capital series for buildings and plant machinery (including other fixed assets), at constant prices (at 1950-51 prices) by applying relevant price indices. Further, we express the inventories also at constant prices i.e. at 1950-51 by applying the price indices of industrial raw materials and of finished products. The price indices used are given in Table 4.2. However, for expressing the assets at constant prices we have deflated the series with relevant deflators of price index numbers.

Finally when we add up the values of all the assets for every year (i.e. buildings, plant and machinery including

other fixed assets and inventories at current prices, we are ready with the consistent value of adjusted capital series at current prices over the whole period. Similarly, when we add up all the assets for every year at constant prices, we are ready with capital series having consistent value and expressing the real productive capacity and growth of the industry. The adjusted capital series at current and constant prices thus derived for each industry are given in Tables 4.4 and 4.5 respectively.

Moreover, we have presented the capital stock at current and constant prices for each of the Sectors viz., (i) Consumers Goods' sector (ii) Basic Goods' Sector (iii) Capital Goods' Sector(iv) Intermediary Goods Sector and (iv) Whole Manufacturing Sector in Table 4.6.

The need for capital series at current and constant prices for these sectors was felt out of the necessity of explaining sector-wise growth profitability relationship as well as sector-wise variation in profitability as a result of sector-wise variations in capital output ratios.

The sector-wise series of capital stock at current and constant prices is derived by summing up the capital stocks of industries covered in the respective sectors for each year for buildings, plant machinery (including other

fixed assets) and inventories separately for each.

Table 4.6 presents therefore total capital stock for each sector for the whole period under study.

However, while constructing the capital series at current and constant prices for every industry and every sector for the whole period, we had to work with some limitations incorporated in the available data on gross value of assets. Hence, it is necessary to point out and bear those limitations in our mind while using the adjusted capital series.

The gross value of fixed assets as published in RBI data suffers from the following short-comings. Firstly, different companies follow different methods of valuation of assets. Therefore, it becomes very difficult to segregate the cases of revaluation or amalgamation and purchase of used assets for different types of assets. Hence the gross values of fixed assets as published in combined balance sheet are a mixture of original cost, second-hand purchase price and written-down value along with a few cases of revaluation. The practical difficulties involved in segregating these different values so as to express the assets at original cost (purchase prices) has kept RBI from undertaking any attempt for revaluing the assets. However, such cases being small

in number would not affect the gross value of assets considerably.

Secondly, the inventories also are valued at cost or market value whichever is lower. Moreover, the company accounts do not reveal the method of estimating the cost price of inventories (viz., Last-in First put i.e. LIFO First-in First FIFO, Standard Price, average cost etc.) used by them. However, in view of practical difficulties im-volved no attempt has been made to revalue the inventories also on a uniform basis.[42]

Though the stock of capital at purchase prices has these deficiencies it broadly represents the capital stock at purchase prices for every industry over the whole period (1950-51 to 1974-75) and hence can be used for our purpose. This is for the first time that adjusted capital series for so many industries over a long period of 25 years is constructed.

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42 Mehta, B.V.: "Industrial Finance in India, A Trend Report" (Taken from : A Survey of Research in Economics, Vol.5, 1975) Indian Council of Social Science Research (ICSSR), pp.113-146.

Table 4.4 : Value of Fixed Assets at Current Prices : By Industry for 1950-51 to 1974-75. (Rs. in Lakhs)

Year	Grains & Pulses				Edible Vegetable and Hydrogenated Oils				Sugar			
	Buildings	Plant & Machinary	Inventories	Total Fixed Assets	Buildings	Plant & Machinary	Inventories	Total Fixed Assets	Buildings	Plant & Machinary	Inventories	Total Fixed Assets
1950-51	145	308	102	555	346	837	538	1721	1060	3362	2326	6748
1951-52	145	357	116	618	349	970	502	1821	1102	4010	3358	8470
1952-53	147	347	89	583	359	1058	449	1866	1169	4455	3453	9077
1953-54	149	384	111	644	362	1057	419	1838	1202	4506	2332	8040
1954-55	151	385	105	641	370	1061	377	1808	1322	4649	3012	8983
1955-56	167	409	161	737	387	1114	493	1994	1572	5635	4758	11965
1956-57	227	444	182	853	421	1147	527	2095	1781	6513	5396	13690
1957-58	245	469	201	915	448	1204	504	2156	1982	7259	5465	14706
1958-59	260	488	169	917	473	1266	610	2349	2168	7787	4858	14813
1959-60	259	513	207	979	476	1335	670	2481	2259	8339	5314	15912
1960-61	226	401	120	747	561	1558	964	3083	2530	9527	8294	20351
1961-62	214	434	112	760	607	1699	977	3283	2845	10300	9911	23056
1962-63	236	451	132	819	562	1764	1038	3364	3122	11027	7905	22054
1963-64	246	497	135	878	584	1929	1092	3605	3230	12207	5528	20965
1964-65	272	518	81	871	679	2029	1120	3828	3424	13006	6586	23016
1965-66	306	529	154	989	458	1995	988	3441	3157	12879	7575	23611
1966-67	344	640	85	1069	515	2419	1210	4144	3496	15629	9539	28664
1967-68	375	690	122	1187	575	2618	1070	4263	3851	16983	6483	27317
1968-69	403	718	149	1270	637	2754	1257	4648	4142	17772	8076	29990
1969-70	440	723	221	1384	734	2974	1454	5162	4585	18819	12167	35571
1970-71	467	641	249	1357	396	2563	1552	4511	5034	21613	17064	43711
1971-72	500	677	255	1432	437	2787	1698	4922	5478	23082	15899	44459
1972-73	547	777	183	1507	465	3039	1896	5400	5909	25710	10993	42612
1973-74	613	910	138	1661	535	3562	1950	6047	6734	29823	14193	50750
1974-75	767	1223	275	2265	703	4947	2474	8124	8502	41002	15887	65391

Table 4.4 (contd.)

Year	Tobacco				Cotton Textiles				Silk-Rayon and Wollen Textiles			
	Build-ings	Plant & Ma-chi-nary	Inven-to-ries	Total Fixed Assets	Build-ings chi-	Plant & Ma-chi-nary	Inven-to-ries	Total Fixed Assets	Build-ings	Plant & Ma-chi-nary	Inven-to-ries	Total Fixed Assts
1950-51	113	166	379	658	9773	26926	10402	47101	341	956	243	1540
1951-52	120	205	453	778	9893	31459	11778	53130	387	1182	410	1979
1952-53	128	237	508	873	10131	34861	10479	55471	416	1408	410	2234
1953-54	140	240	423	803	10374	35102	10379	55855	458	1544	422	2424
1954-55	140	243	366	749	10596	35554	10234	56384	498	1643	501	2642
1955-56	279	525	1335	2139	11416	38159	10887	60762	648	2169	499	3316
1956-57	315	608	1453	2376	12410	41049	13791	67250	738	2557	767	4062
1957-58	350	699	1525	2574	13381	44329	15149	72859	830	2884	808	4522
1958-59	377	769	1617	2763	14218	46788	13973	74979	907	3040	782	4729
1959-60	391	821	1560	2772	14388	49496	13195	77079	955	3228	829	5012
1960-61	422	892	1679	2993	16538	58754	18584	93876	1241	4227	1057	6525
1961-62	458	982	1876	3316	17798	63695	19663	101156	1467	5590	1333	8390
1962-63	509	1053	2075	3637	19146	69379	21465	109990	1742	6250	1914	9906
1963-64	538	1167	2053	3758	20106	79457	22263	121826	1902	7166	2345	11413
1964-65	581	1225	2044	3850	21973	84596	25280	131849	2129	7670	2745	12544
1965-66	637	1357	2190	4184	21232	79298	24312	124842	3303	12218	4432	19953
1966-67	709	1651	2707	5067	23390	97498	23646	144534	3701	15668	4770	24139
1967-68	761	1719	3310	5850	25171	104223	28522	157916	4185	17683	5206	27074
1968-69	816	1904	3670	6390	26918	107645	30747	165310	4640	19452	4820	28912
1969-70	941	2045	4207	7193	29496	110577	31871	171944	5258	21247	5332	31837
1970-71	955	2658	4741	8354	26732	119502	32074	178308	5015	21081	5527	31623
1971-72	1056	3128	6441	10625	28881	128212	36352	193445	5654	23210	6123	34987
1972-73	1124	3661	6868	11653	31009	143374	40280	214663	6177	27005	7123	40305
1973-74	1305	4557	7284	13146	35005	165416	48532	248953	7103	32906	9053	49062
1974-75	1758	6518	8458	16734	43802	225057	56314	325173	9292	54251	11219	74762

Table 4.4 (contd.)

Year	Medicines and Pharmaceutical Preparations				Matches				Pottery - China Earthenware & Structural Clay Products			
	Buildings	Plant & Machinary	Inventories	Total Fixed Assets	Buildings	Plant & Machinary	Inventories	Total Fixed Assets	Buildings	Plant & Machinary	Inventories	Total Fixed Assets
1950-51	148	192	144	484	127	277	151	555	173	300	97	570
1951-52	153	234	164	551	132	321	237	690	175	355	91	621
1952-53	158	266	151	575	130	348	227	705	182	398	109	689
1953-54	160	272	161	593	147	371	226	744	187	397	119	703
1954-55	163	281	165	609	159	404	203	766	191	401	139	731
1955-56	194	318	183	695	165	412	187	764	254	540	167	961
1956-57	209	342	201	752	177	427	207	811	374	570	188	1132
1957-58	231	376	227	834	194	503	218	915	425	638	212	1275
1958-59	257	426	249	932	231	540	214	985	468	710	221	1399
1959-60	272	480	269	1021	240	565	214	1019	477	764	232	1473
1960-61	544	1113	1148	2805	254	603	230	1087	594	1094	284	1972
1961-62	677	1391	1305	3373	267	638	215	1120	641	1168	384	2193
1962-63	854	1654	1351	3859	288	663	254	1205	683	1283	444	2410
1963-64	967	2052	1506	4525	307	734	263	1304	734	1473	483	2690
1964-65	1088	2292	1633	5013	339	757	228	1324	784	1542	453	2779
1965-66	1658	3502	3022	8182	377	826	272	1475	1018	2576	694	4288
1966-67	1845	4524	3677	10046	409	920	310	1639	1108	2629	817	4554
1967-68	2154	5170	4113	11437	441	1074	333	1848	1210	2828	816	4854
1968-69	2463	5652	4253	12368	479	1123	337	1939	1293	2939	864	5096
1969-70	2777	6144	4553	13474	515	1184	336	2035	1449	3064	886	5399
1970-71	3187	7893	6020	17100	NA	NA	NA	NA	1540	2505	977	5022
1971-72	3708	9078	6813	19599	NA	NA	NA	NA	1392	2730	986	5108
1972-73	4186	10343	7858	22387	NA	NA	NA	NA	1505	3091	1148	5744
1973-74	4831	12319	8349	25490	NA	NA	NA	NA	1735	3738	1308	6781
1974-75	6175	16991	10811	33977	NA	NA	NA	NA	2214	5231	1531	8976

Table 4.4 (contd.)

Year	Paper & Paper Products				Iron & Steel				Aluminium			
	Buildings	Plant & Machinery	Inventories	Total Assets	Buildings	Plant & Machinery	Inventories	Total Assets	Buildings	Plant & Machinery	Inventories	Total Assets
1950-51	535	1858	379	2772	1302	9096	1574	11972	167	460	132	759
1951-52	557	2223	473	3253	1311	10491	1932	13734	171	548	183	902
1952-53	587	2503	487	3577	1393	11672	2150	15215	193	617	248	1058
1953-54	628	2602	435	3665	1532	12035	2097	15664	200	677	235	1112
1954-55	665	2698	496	3859	1574	12787	2135	16496	218	726	240	1184
1955-56	859	3306	640	4805	2511	13846	1998	18355	301	845	257	1403
1956-57	935	3676	711	5322	3110	16820	2219	22149	325	904	303	1732
1957-58	1095	4439	912	6446	3423	23848	3304	30575	394	1143	428	1965
1958-59	1268	4902	1039	7209	3676	28341	4105	36122	472	1347	421	2240
1959-60	1290	5312	1129	7731	4012	30377	4394	38783	515	1423	502	2440
1960-61	1567	6592	1351	9510	4333	33298	4660	42291	556	1504	373	2433
1961-62	1742	7504	1307	10553	4612	34731	4906	44239	664	2250	465	3379
1962-63	1864	8438	1799	12101	4872	36339	5125	46336	723	2521	545	3789
1963-64	2037	11006	2166	15209	5052	39765	5411	50228	786	2983	617	4386
1964-65	2305	12104	2328	16737	5404	40694	5420	51518	910	3307	654	4871
1965-66	3032	15179	2940	21151	5992	44197	5956	56145	1730	6922	1365	10017
1966-67	3410	19242	3075	25727	6537	55048	6424	68009	2107	9994	1656	13757
1967-68	3728	20649	3335	27712	6992	58902	6761	72655	2248	11134	1899	15281
1968-69	4096	21653	3543	29292	7408	60462	6136	74006	2605	12118	2041	16764
1969-70	4617	22305	3835	30257	8392	61561	5983	75936	3174	13256	2556	18986
1970-71	5084	25595	4396	35075	8855	69169	6673	84697	2672	15932	2465	21069
1971-72	5587	27932	5136	38655	9305	74144	8014	91463	3198	16818	3102	23118
1972-73	6100	31959	5902	43961	9942	82417	8550	100909	3505	19465	3515	26485
1973-74	7004	37669	6562	51235	11106	94417	10917	116440	4046	21543	3278	28867
1974-75	8936	52603	8894	70433	13911	127301	14318	155530	5103	29793	4162	39058

Table 4.4 (contd.)

Year	Basic Industrial Chemicals				Cement				Transport Equipment			
	Build-ings	Plant & Ma-chi-nary	Inven-to-ries	Total Fixed Assets	Build-ings	Plant & Ma-chi-nary	Inven-to-ries	Total Fixed Assets	Build-ings	Plant & Ma-chi-nary	Inven-to-ries	Total Fixed Assets
1950-51	392	1254	336	1982	1008	3086	802	4896	319	646	531	1496
1951-52	405	1462	349	2216	1051	3690	838	5579	331	772	635	1738
1952-53	440	1628	461	2529	1095	4183	1027	6305	348	860	623	1831
1953-54	442	1665	416	2523	1146	4293	998	6437	367	904	776	2047
1954-55	456	1714	401	2571	1239	4481	908	6628	375	971	944	2290
1955-56	500	1475	427	2402	1442	5359	1070	7870	951	1968	2785	5704
1956-57	559	1591	483	2633	1633	6106	1381	9120	1172	2389	4727	8288
1957-58	637	1824	559	3020	1941	6928	2022	10891	1358	3032	4640	9030
1958-59	793	2430	632	3855	2210	7935	2261	12406	1498	3745	4199	9442
1959-60	858	2826	765	4449	2305	8769	1918	12992	1602	4443	4219	10264
1960-61	1540	4829	1577	7946	2585	9942	1943	14470	2195	5778	6341	14314
1961-62	1916	6265	2025	10206	2855	10456	2332	15643	2603	6780	7388	16771
1962-63	2194	8024	2520	12738	3108	11316	2578	17002	3093	7992	7696	18781
1963-64	2537	10187	3049	15773	3238	13236	3012	19486	3383	10645	9555	23583
1964-65	3022	11191	3195	17408	3740	13942	3137	20819	3816	12549	10687	27052
1965-66	4075	14569	4140	22784	4288	15396	3410	23094	5176	16373	12662	34211
1966-67	4575	20905	5083	30563	4803	18366	3977	27146	6024	25623	14089	45736
1967-68	5123	23783	6429	35335	5455	21070	4775	31300	6738	26853	15642	49233
1968-69	6932	26373	7006	40311	6212	23244	4920	34376	7532	28369	14489	50390
1969-70	8475	29355	7351	45181	6803	24922	5147	36872	8470	30049	16061	54580
1970-71	10006	55322	13126	78454	7460	29123	5687	42278	8095	32950	15942	56987
1971-72	11443	62778	14611	88832	8086	31064	6237	45387	8959	35920	18492	63371
1972-73	12715	72891	15357	100963	8601	34061	6799	49461	9849	40966	19787	70602
1973-74	14623	86702	17231	118556	9942	37969	7366	55277	11520	48450	23356	83326
1974-75	18518	119336	26603	164457	12277	51817	8095	72189	14793	67655	30314	112762

Table 4.4 (contd.)

Year	Electrical Machinery, Apparatus & Appliances				Machinery (Other than Transport etc.)				Ferrous/Non-Ferrous Metal Products			
	Build-ings	Plant & Ma chi-nary	Inven-to-ries	Total Fixed Assets	Build-ings	Plant & Ma-chi-nary	Inven-to-ries	Total Fixed Assets	build-ings	Plant & Ma-chi-nary	Inven-to-ries	Total Fixed Assets
1950-51	183	314	290	847	1128	2226	1356	4710	34	106	142	282
1951-52	180	416	405	1001	1214	2776	1635	5625	37	131	166	334
1952-53	210	499	601	1310	1260	3173	1727	6160	42	154	95	291
1953-54	227	521	406	1154	1341	3284	1952	6577	44	161	93	298
1954-55	244	555	477	1276	1420	3415	2121	6956	45	170	112	327
1955-56	274	786	929	1989	1370	3595	2239	7204	48	156	117	321
1956-57	313	907	1112	2332	1592	3982	2694	8268	56	175	131	362
1957-58	383	1034	1172	2589	1859	4548	3517	9924	63	200	121	384
1958-59	438	1195	1321	2954	2073	5225	3761	11059	68	213	144	425
1959-60	454	1402	1489	3345	2237	5820	4232	12289	71	223	165	459
1960-61	881	2590	2928	6399	1641	3817	3340	8798	1082	3151	2579	6812
1961-62	975	3027	3418	7420	1700	4648	3969	10317	1252	3546	2765	7563
1962-63	1162	3434	3739	8335	2228	5447	4871	12546	1346	4017	3503	8866
1963-64	1349	4267	4410	10026	2369	6455	5428	14252	1490	4749	3610	9849
1964-65	1627	5138	5094	11859	2694	7244	6263	16201	1703	5167	4028	10898
1965-66	2948	8235	9202	20385	4091	10068	8618	22777	2489	7347	5743	15579
1966-67	3492	11465	10877	25834	4655	13257	10467	28379	2689	9891	6829	19609
1967-68	3978	13041	12406	29425	5160	14919	12068	32147	3218	10973	7196	21387
1968-69	44516	14046	11547	30044	5604	15737	11719	33060	3506	11757	6909	22172
1969-70	5049	14886	13346	33281	6293	16607	12232	35132	3914	12331	7068	23313
1970-71	6354	20468	17189	44011	8067	22708	18979	49754	3731	11868	6763	22362
1971-72	7091	22798	19061	48950	8952	25144	22759	56855	4182	13110	8344	25636
1972-73	7745	26187	20604	54536	9862	28961	23356	62179	4580	14835	8985	28400
1973-74	9054	30765	22753	62572	11442	34168	26670	72280	5286	17298	10933	33517
1974-75	14935	42754	28532	86221	14934	47986	34863	97783	6679	24071	14776	45526

Table 4.4 (contd.)

Year	Jute Textiles				Other Chemical Products				Rubber & Rubber Products			
	Buildings	Plant & Machinery	Inventories	Total Fixed Assets	Buildings	Plant & Machinery	Inventories	Total Fixed Assets	Buildings	Plant & Machinery	Inventories	Total Fixed Assets
1950-51	5149	9929	2569	17647	46	104	62	212	189	320	279	788
1951-52	5152	11429	3604	20185	53	131	125	309	209	392	430	1031
1952-53	5232	12363	2215	19810	55	148	107	310	235	449	441	1125
1953-54	5278	12213	2258	19749	56	151	98	305	257	465	376	1098
1954-55	5309	12350	1876	19535	56	155	117	328	264	486	411	1161
1955-56	5668	13173	2668	21509	175	338	338	851	281	527	422	1230
1956-57	5988	13721	2934	22643	207	435	415	1057	303	580	499	1382
1957-58	6283	14452	2650	23385	220	475	514	1209	347	665	532	1544
1958-59	6239	15027	3025	24291	234	517	510	1261	394	877	562	1833
1959-60	5752	15740	3301	24793	248	576	575	1399	414	976	586	1976
1960-61	6046	15946	3668	25660	278	658	636	1572	519	1360	899	2778
1961-62	6388	16745	3880	27013	332	737	713	1782	610	1532	1208	3350
1962-63	6791	18024	5036	29851	360	816	712	1908	665	1694	1375	3734
1963-64	7123	20557	5509	33189	438	942	756	2136	714	2001	1347	4062
1964-65	7610	21635	5591	34836	511	1066	824	2401	796	2243	1417	4456
1965-66	6225	16852	5170	28248	1261	2633	3388	7282	1056	3345	2144	6545
1966-67	6747	20124	6129	33000	1494	3548	3670	8712	1178	4205	2650	8033
1967-68	7203	21137	5557	33897	1610	4234	3998	9842	1286	4627	2717	8630
1968-69	7691	21950	5675	35316	1789	4652	4624	11065	1391	5191	3122	9704
1969-70	8341	22545	6943	37829	1993	5002	4813	11808	1 87	5676	3666	11029
1970-71	9123	25593	8031	42747	2534	6772	6288	15594	1954	6777	4160	12891
1971-72	9750	27181	8844	45775	2828	7476	6953	17257	2272	9118	4832	16222
1971-73	10352	29977	8830	49159	3609	9253	7808	20670	2479	10495	5375	18349
1974-74	11625	34045	11373	57043	4175	10915	8172	23262	2922	12223	5400	20545
1974-75	14524	46066	12348	72938	6092	15204	12844	34140	4103	16682	8537	29322

Notes: 1. Buildings & Plant Machinery & Other Fixed Assets are derived as explained in the text.
2. Inventories are taken from Financial Statistics of Joint Stock Companies in India, RBI.
3. Total Fixed assets comprise of total of buildings, plant and machinery and other fixed assets and inventories at current prices.

Table 4.5 : Value of Fixed Assets and Inventories at 1950-51 Prices : 1950-51 to 1974-75: By Industry. (Rs. in Lakhs).

Year	Grains & Pulses					Edible Vegetable and Hydrogenated Oils					Sugar				
	Buildings	Plant & Machinary	Raw materials	Finished Prod. &Others	Total	Buildings	Plant & Machinery	Raw materials	Finished Prod. and others	Total	Buildings	Plant & Machinery	Raw materials	Finished Prod. &Others	Total
1950-51	145	308	38	64	555	346	837	208	330	1721	1060	3362	321	2005	6748
1951-52	146	313	39	63	561	350	850	149	290	1639	1106	3512	381	2546	7545
1952-53	146	282	41	59	528	356	860	223	284	1723	1161	3622	469	3151	8403
1953-54	147	319	70	55	591	358	877	206	253	1694	1188	3740	443	1991	7362
1954-55	149	323	59	60	591	365	889	162	255	1671	1303	3896	532	2642	8373
1955-56	162	342	139	57	700	375	930	221	333	1859	1523	4705	537	4448	11213
1956-57	209	365	105	88	767	388	943	209	334	1874	1640	5354	452	4825	12271
1957-58	214	375	133	78	800	392	962	208	300	1862	1734	5800	475	4744	12753
1958-59	218	382	87	88	775	397	990	254	364	2005	1821	6089	487	4171	12568
1959-60	218	392	112	92	814	401	1021	272	379	2073	1904	6379	503	4428	13214
1960-61	181	292	56	48	577	450	1133	335	491	2409	2029	6926	525	6392	15872
1961-62	163	308	54	43	568	463	1205	308	524	2500	2168	7303	537	7619	17627
1962-63	173	312	67	50	602	413	1219	386	509	2527	2292	7620	672	5770	16354
1963-64	177	318	79	40	614	420	1235	371	546	2572	2322	7812	664	3784	14582
1964-65	187	328	27	35	577	466	1284	325	541	2616	2352	8233	466	4537	15588
1965-66	196	315	60	47	618	293	1189	224	466	2172	2017	7676	339	4960	14992
1966-67	205	327	22	31	585	307	1236	206	554	2303	2087	7986	213	5976	16262
1967-68	212	343	30	46	631	324	1301	205	468	2298	2172	8441	239	3923	14775
1968-69	215	353	38	52	658	340	1355	267	501	2463	2212	8744	263	4759	15978
1969-70	218	355	56	65	694	364	1460	282	529	2635	2274	9240	195	6905	18614
1970-71	218	291	66	59	634	185	1164	225	585	2159	2346	9812	240	9068	21466
1971-72	219	295	71	55	640	191	1215	290	561	2257	2399	10064	270	7838	20571
1972-73	229	315	46	38	628	194	1231	364	529	2318	2470	10413	277	5044	18204
1973-74	229	332	16	36	613	200	1300	215	536	2251	2519	10885	201	5808	19413
1974-75	235	340	26	62	663	215	1375	234	561	2385	2602	11399	249	5129	19379

Table 4.5 (contd.)

Year	Tobacco					Cotton Textiles					Silk-Rayon & Woollen Textiles				
	Buildings	Plant & Machinary	Raw materials	Finished Prod. &Others	Total	Buildings	Plant & Machinary	Raw materials	Finished Prod. &Others	Total	Buildings	Plant & Machinary	Raw materials	Finished Prod. &Others	Total
1950-51	113	166	285	94	658	9773	26926	4680	5722	47101	341	956	118	125	1540
1951-52	120	180	273	125	698	9933	27558	4461	5857	47809	389	1035	99	259	1782
1952-53	127	193	442	165	927	10060	28342	5337	6517	50256	413	1145	123	322	2003
1953-54	138	199	348	140	825	10250	29135	4149	7055	50589	453	1282	161	293	2189
1954-55	138	204	330	111	783	10448	29794	4359	6958	51559	491	1377	159	383	2410
1955-56	270	438	1312	351	2371	11062	32113	5938	6540	55653	628	1811	202	354	2995
1956-57	290	500	1165	428	2383	11430	33742	5650	8579	59401	680	2102	393	412	3587
1957-58	306	559	1127	491	2483	11708	35419	5062	10017	62206	726	2304	309	501	3840
1958-59	317	601	1238	494	2650	11943	36588	4246	9633	62410	762	2377	286	499	3924
1959-60	330	628	1115	463	2536	12129	37864	5063	7694	62750	805	2469	339	466	4079
1960-61	338	648	1013	458	2457	13263	42714	6076	9810	71863	995	3073	311	590	4969
1961-62	349	696	1205	460	2710	13562	45160	6500	10279	75501	1118	3963	414	721	6216
1962-63	374	728	1360	526	2988	14053	47941	6324	11912	80230	1279	4319	603	1029	7230
1963-64	387	747	1401	439	2974	14456	50852	7963	10813	84084	1368	4586	698	1256	7908
1964-65	399	775	1190	430	2794	15095	53549	6847	12681	88172	1463	4855	590	1521	8429
1965-66	407	809	1092	424	2732	13567	47262	5505	11449	77783	2111	7282	899	2193	12485
1966-67	423	844	1129	479	2875	13964	49821	3902	10970	78657	2209	8006	763	2240	13218
1967-68	429	884	1493	522	3328	14196	51799	5376	12588	83959	2360	8788	988	2291	14427
1968-69	436	937	1569	625	3567	14374	52961	5964	12857	86156	2478	9570	866	2088	15002
1969-70	467	1004	1487	757	3715	14630	54293	5481	12379	86783	2608	10432	836	2163	16039
1970-71	445	1207	1665	636	3953	12457	54254	4599	12157	83467	2337	9571	824	2059	14791
1971-72	463	1364	2208	945	4980	12650	55900	5324	12921	86795	2476	10120	965	2103	15664
1972-73	470	1483	2214	952	5119	12962	58066	6989	12045	90062	2582	10937	1001	2384	16904
1973-74	488	1663	1505	1021	4677	13092	60317	6027	12398	91894	2657	12011	899	2628	18195
1974-75	538	1812	1697	817	4864	13403	62566	4848	13338	94155	2843	15082	901	2736	21562

Table 4.5 (contd.)

Year	Medicines & Pharmaceuticals Preparations					Matches					Pottery - China Earthernware and Structural Clay Products				
	Buildings	Plant & Machinery	Raw materials & Others	Finished Prod. & Others	Total	Buildings	Plant & Machinery	Raw materials	Finished Prod. &Others	Total	Buildings	Plant & Machinery	Raw materials	Finished Prod. &Others	Total
1950-51	148	192	78	66	484	127	277	82	69	555	173	300	41	56	570
1951-52	154	205	78	66	503	133	281	118	90	622	176	311	35	44	566
1952-53	157	216	99	76	548	129	283	168	101	681	181	324	65	60	630
1953-54	158	226	93	86	563	145	308	137	115	705	185	330	62	69	646
1954-55	161	235	100	88	584	157	339	132	102	730	188	336	76	81	681
1955-56	188	266	85	122	661	160	344	120	98	722	246	451	65	121	883
1956-57	192	281	88	120	681	163	351	111	107	732	344	469	60	131	1004
1957-58	202	300	92	136	730	170	402	123	103	798	372	510	62	147	1091
1958-59	216	333	95	155	799	194	422	110	109	835	393	555	59	159	1166
1959-60	229	367	107	154	857	202	432	105	104	843	402	584	60	160	1206
1960-61	436	809	410	574	2229	204	438	99	99	840	476	795	43	212	1526
1961-62	516	986	465	652	2619	203	452	110	78	843	488	828	63	257	1636
1962-63	627	1143	522	646	2938	211	458	155	74	898	501	887	105	268	1761
1963-64	695	1313	579	698	3285	221	470	150	81	922	528	943	119	279	1869
1964-65	747	1451	526	741	3465	233	479	101	78	891	539	976	94	254	1863
1965-66	1059	2087	747	1360	5253	241	492	112	78	923	651	1535	109	375	2670
1966-67	1101	2312	750	1543	5706	244	470	105	82	901	661	1343	105	412	2521
1967-68	1215	2569	823	1763	6370	249	534	116	89	988	682	1406	109	409	2606
1968-69	1315	2781	891	1709	6696	256	553	109	94	1012	690	1446	101	431	2668
1969-70	1377	3017	859	1680	6933	255	581	95	87	1018	719	1504	101	403	2727
1970-71	1485	3583	1045	2068	8181	NA	NA	NA	NA	NA	718	1137	210	421	2486
1971-72	1624	3958	1226	2178	8986	NA	NA	NA	NA	NA	610	1190	83	415	2298
1972-73	1750	4189	1443	2264	9446	NA	NA	NA	NA	NA	629	1252	125	424	2430
1973-74	1807	4496	1042	2122	9467	NA	NA	NA	NA	NA	649	1364	102	418	2533
1974-75	1890	4723	1236	2187	10036	NA	NA	NA	NA	NA	677	1454	107	393	2631

Table 4.5 (contd.)

Year	Paper & Paper Products					Iron & Steel					Aluminium				
	Buildings	Plant & Machinary	Raw materials	Finished Prod. &Others	Total	Buildings	Plant & Machinary	Raw materials	Finished Prod. & Others	Total	Buildings	Plant & Machinary	Raw materials	Finished Prod. & Others	Total
1950-51	535	1858	304	75	2772	1302	9096	293	1281	11972	167	460	40	82	749
1951-52	559	1947	334	83	2923	1316	9190	332	1355	12193	172	480	46	114	812
1952-53	583	2035	529	84	3231	1383	9489	524	1750	13146	192	502	88	184	966
1953-54	620	2160	427	86	3293	1514	9989	478	1724	13705	198	562	68	181	1009
1954-55	656	2261	519	94	3530	1552	10716	520	1759	14547	215	608	120	149	1092
1955-56	832	2761	216	487	4296	2433	11561	476	1674	16144	292	706	98	187	1283
1956-57	861	3022	221	501	4605	2864	13826	504	1719	18913	299	743	112	199	1353
1957-58	958	3547	330	582	5417	2995	19055	701	2522	25273	345	913	161	267	1686
1958-59	1065	3833	469	590	5957	3088	22163	813	3191	29255	396	1053	206	225	1880
1959-60	1087	4064	436	655	6242	3382	23238	711	3406	30737	434	1089	213	275	2011
1960-61	1257	4792	371	778	7198	3475	24208	584	3325	31592	446	1093	124	195	1858
1961-62	1327	5320	423	691	7761	3514	24624	791	3304	32233	506	1595	185	214	2500
1962-63	1368	5831	620	923	8742	3576	25110	786	3448	32920	531	1742	194	276	2743
1963-64	1465	7044	693	1120	10322	3632	25450	839	3546	33467	565	1909	211	308	2993
1964-65	1584	7662	760	1046	11052	3713	25759	603	3528	33603	625	2093	232	279	3229
1965-66	1937	9047	621	1430	13035	3829	26341	612	3550	34332	1105	4126	324	628	6183
1966-67	2036	9833	539	1390	13798	3903	28130	453	3671	36157	1258	5107	306	732	7403
1967-68	2103	10263	556	1551	14473	3943	29274	559	3757	37533	1268	5534	341	857	8000
1968-69	2187	10653	567	1609	15016	3956	29747	671	3117	37491	1391	5962	310	944	8607
1969-70	2290	10952	601	1556	15399	4162	30226	452	2986	37826	1574	6509	461	968	9512
1970-71	2369	11620	636	1659	16284	4162	31403	479	3093	39137	1245	7233	534	722	9734
1971-72	2447	12178	696	1886	17207	4076	32327	560	3500	40463	1401	7333	733	807	10274
1972-73	2550	12943	769	2040	18302	4156	33379	458	3662	41655	1465	7883	801	845	10994
1973-74	2619	13749	509	2104	18981	4154	34462	336	4213	43165	1513	7863	354	912	10642
1974-75	2734	14624	735	2145	20238	4257	35390	514	3495	43656	1562	8282	477	840	11161

Table 4.5 (contd.)

Year	Basic Industrial Chemicals					Cement					Transport Equipment				
	Buildings	Plant & Machinery	Raw materials	Finished Prod. &Others	Total	Buildings	Plant & Machinery	Raw materials	Finished Prod. &Others	Total	Buildings	Plant & Machinery	Raw materials	Finished Prod. &Others	Total
1950-51	392	1254	71	265	1982	1008	3086	188	614	4896	319	646	356	175	1496
1951-52	407	1281	86	219	1993	1055	3282	224	509	5020	332	676	301	256	1565
1952-53	437	1324	158	346	2265	1087	3401	511	648	5647	346	699	433	297	1775
1953-54	437	1382	127	315	2261	1132	3563	384	691	5770	363	750	305	532	1950
1954-55	450	1436	144	294	2324	1222	3755	301	685	5963	370	814	330	699	2213
1955-56	485	1232	148	321	2186	1396	4475	314	851	7036	922	1643	1078	2013	5656
1956-57	515	1308	164	328	2315	1504	5019	125	1227	7875	1079	1964	1689	3147	7879
1957-58	557	1457	192	365	2571	1698	5535	146	1780	9159	1188	2423	1716	2928	8255
1958-59	666	1900	241	396	3203	1856	6205	170	1989	10220	1258	2929	1886	2387	8460
1959-60	723	2162	268	468	3621	1943	6708	129	1643	10423	1350	3399	1701	2390	8840
1960-61	1235	3511	434	908	6088	2074	7228	123	1497	10922	1760	4201	1890	3516	11367
1961-62	1460	4442	574	1144	7620	2176	7413	124	1795	11508	1983	4807	2721	3614	13125
1962-63	1610	5545	799	1351	9395	2281	7819	214	1886	12200	2270	5522	2573	4015	14380
1963-64	1824	6220	929	1616	10589	2388	8471	239	2164	13202	2432	6813	3221	4805	17271
1964-65	2076	7084	806	1658	11624	2569	8825	214	2168	13776	2622	7944	3402	4886	18854
1965-66	2604	8683	1073	1812	14172	2740	9176	171	2214	14301	3307	9758	3919	4899	21883
1966-67	2731	10682	1153	2001	16567	2867	9385	184	2383	14819	3596	13093	3814	4839	25342
1967-68	2889	11820	1568	2452	18729	3077	10472	218	2844	16611	3800	13346	4799	4904	26849
1968-69	3702	12976	1496	2784	20958	3317	11436	296	2756	17805	4022	13958	4034	4760	26774
1969-70	4204	14413	1253	2868	22738	3374	12237	418	2536	18565	4201	14754	3983	4836	27774
1970-71	4663	25116	1831	5035	36645	3476	13222	435	2604	19737	3772	14959	3705	4370	26806
1971-72	5012	27371	2077	5260	39720	3542	13544	451	2708	20245	3924	15661	4627	4534	28746
1972-73	5315	29521	2090	5211	42137	3595	13295	517	2747	20654	4117	16591	4569	4694	29971
1973-74	5469	31646	1598	5215	43888	3718	13859	378	2632	20587	4308	17684	3561	5043	30596
1974-75	5667	33175	2386	6183	47411	3757	14405	406	2273	20841	4527	18808	3918	5581	32834

Table 4.5 (contd.)

Year	Electrical Machinery, Apparatus & Appliances					Machinery (Other than Transport etc.)					Ferrous/Non-ferrous Metal Products				
	Build-ings	Plant & Ma-chi-nary	Raw mate rials	Fini-shed Prod. &Oth-ers	Total	Build-ings	Plant & Ma-chi-nary	Raw mate rials	Fini-shed Prod. &Oth-ers	Total	Build-ings	Plant & Ma-chi-nary	Raw mate rials	Fini-shed Prod. &Oth-ers	Total
1950-51	183	374	87	203	847	1128	2226	615	741	4710	34	106	58	84	282
1951-52	181	364	196	157	889	1219	2432	614	818	5083	37	115	64	82	298
1952-53	209	406	405	207	1227	1251	2580	882	1072	5783	42	125	34	70	271
1953-54	224	432	178	233	1067	1325	2726	887	1238	6176	43	134	23	75	275
1954-55	241	465	264	221	1191	1400	2862	1139	1256	6657	44	142	55	70	311
1955-56	266	656	495	455	1872	1328	3002	720	1731	6781	47	130	45	86	308
1956-57	288	746	505	567	2106	1466	3273	784	1942	7463	52	144	51	83	330
1957-58	335	826	535	567	2263	1627	3634	1024	2452	8737	55	160	33	86	334
1958-59	368	934	561	683	2546	1741	4086	1030	2688	9545	577	167	52	928	368
1959-60	383	1013	605	758	2819	1886	4452	1102	2919	10359	60	171	67	93	391
1960-61	707	1883	1121	1394	5105	1316	2775	1103	1753	6947	868	2291	1170	1060	5389
1961-62	743	2146	1230	1698	5817	1295	3295	1254	2127	7971	954	2514	1188	1202	5858
1962-63	853	2373	1490	1750	6466	1635	3764	1780	2415	9594	988	2776	1654	1424	6842
1963-64	970	2731	1865	1901	7467	1703	4131	1838	2722	10394	1071	3039	1588	1505	7203
1964-65	1118	3252	1754	2205	8329	1851	4585	1941	2913	11290	1170	3271	1385	1746	7572
1965-66	1884	4908	2650	3636	13078	2614	6001	2513	3490	14618	1590	4379	1681	2320	9970
1966-67	2085	5859	2813	4204	14961	2779	6774	2398	4091	16042	1725	5051	1660	2560	10999
1967-68	2244	6481	3317	4560	16602	2910	7415	2828	4728	17881	1815	5454	1823	2672	11764
1968-69	2377	6911	2812	4359	16459	2993	7743	2554	4603	17893	1872	5784	1699	2508	11863
1969-70	2504	7309	2529	4131	16473	3121	8154	2378	4435	18088	1941	6055	1540	2372	11908
1970-71	2961	9292	3491	5306	21050	3759	10309	3514	6258	23840	1739	5388	1479	1964	10570
1971-72	3106	9940	4172	5308	22526	3921	10963	4405	6950	26239	1832	5716	1912	2232	11692
1972-73	3237	10106	3978	5727	23048	4122	11729	4275	6744	26870	1914	6008	1827	2398	12147
1973-74	3386	11229	3092	5440	23147	4279	12471	3486	6570	26806	1977	6314	1507	2584	12382
1974-75	4570	11886	3423	5577	25456	4570	13340	4271	6707	28888	2044	6692	1933	2692	13361

Table 4.5 (contd.)

Year	Jute Textiles					Other Chemical Products					Rubber & Rubber Products				
	Buildings	Plant & Machinary	Raw materials	Finished Prod. &Others	Total	Buildings	Plant & Machinary	Raw materials	Finished Prod. &Others	Total	Buildings	Plant & Machinary	Raw materials	Finished Prod. &Others	Total
1950-51	5149	9929	957	1612	17647	46	104	22	40	212	189	320	129*	150	788
1951-52	5173	10012	1593	1569	18347	53	115	29	80	277	210	343	176*	201	930
1952-53	5195	10051	1151	1360	17757	55	120	29	87	291	233	365	267*	241	1106
1953-54	5215	10137	1542	1005	17899	55	125	23	80	283	254	386	212*	204	1056
1954-55	5235	10349	1163	988	17735	55	130	32	94	311	260	407	244*	225	1136
1955-56	5492	10999	1803	1334	19628	170	282	204	187	843	272	440	258	233	1203
1956-57	5515	11279	1815	1314	19923	191	358	213	222	984	279	477	296	234	1286
1957-58	5498	11547	1560	1188	11793	193	380	252	273	1098	304	531	335	220	1390
1958-59	5241	11751	1926	1247	20165	197	404	254	268	1123	331	686	367	225	1609
1959-60	4849	12041	2122	1185	19997	209	441	247	313	1210	349	747	385	203	1684
1960-61	4849	11593	1719	1457	19618	223	478	266	282	1249	416	989	473	309	2187
1961-62	4868	11872	2118	1285	20143	253	523	297	318	1391	465	1086	622	433	2606
1962-63	4985	12455	3077	1463	21980	279	564	325	299	1467	488	1171	779	451	2889
1963-64	5121	13156	3064	1761	23102	315	603	281	358	1557	513	1281	692	478	2964
1964-65	5228	13695	2296	2073	23292	351	675	291	350	1667	547	1420	579	529	3075
1965-66	3978	10044	1686	1915	17623	806	1569	1195	1163	4733	675	1994	785	707	4161
1966-67	4028	10283	1854	1882	18047	892	1813	979	1277	4961	703	2149	866	741	4459
1967-68	4062	10505	1583	1873	18023	908	2104	1236	1243	5491	725	2300	930	748	4703
1968-69	4107	10799	1331	2128	18365	955	2289	1361	1440	6045	743	2554	1040	844	5181
1969-70	4137	11070	1691	2160	19058	989	2456	1155	1493	6093	837	2787	1010	987	5621
1970-71	4251	11619	1696	2402	19968	1181	3074	1366	1836	7457	911	3077	1085	1001	6074
1971-72	4271	11851	1883	2519	20524	1239	3260	1741	1812	8052	995	3975	1278	1111	7359
1972-73	4327	12141	1682	2480	20630	1509	3747	1878	1916	9050	1036	4250	1406	1098	7790
1973-74	4348	12426	1688	2520	20982	1561	3984	1801	1705	9051	1093	4461	924	1026	7504
1974-75	4444	12806	1501	2389	21140	1864	4227	2123	2270	10484	1256	4638	1331	1294	8519

Note: 1. Buildings & Plant and Machinery & Other Fixed Assets are derived as explained in the text.
2. Inventories are taken from Financial Statistics of Joint Stock Companies in India, RBI.
3. Total Fixed Assets comprise of total of buildings, plant and machinery & Other fixed assets and inventories at current prices.

Table 4.6 : Capital in Different Manufacturing Sectors at Current & Constant Prices.

(1950-51 Prices)
(Rs. in lakhs)

Year	Consumer's Goods Sector		Basic Goods Sector		Capital Goods Sector		Intermediary Goods Sector		Whole Manufacturing Sector	
	Current price	Constant price	Current price	Constant price	Current price	Constant price	Current price	Constant price	Current price	Constant price
1950-51	62704	62704	19609	19609	7335	7335	18647	18647	108285	108285
1951-52	71911	64648	22431	20018	8698	7844	21525	19554	124565	112064
1952-53	75650	68930	25107	22024	9592	9056	21245	19157	131594	119164
1953-54	75309	68457	25736	22745	10076	9468	21152	19238	132273	119908
1954-55	77172	70912	26879	23926	10849	10372	21024	19182	135924	124392
1955-56	88138	81353	30030	26649	15218	14617	22590	21674	155976	144293
1956-57	98343	87305	35434	30456	19250	17780	25082	22193	178109	157734
1957-58	107202	91980	46451	38689	21927	19589	26138	14281	201718	164539
1958-59	111075	93089	54623	44558	23880	20919	27385	22897	216963	181463
1959-60	115479	94614	58664	46792	26357	22409	28168	22891	228668	186706
1960-61	142949	109940	67140	50460	36323	28808	30010	23054	276422	212262
1961-62	157200	117981	73467	53861	42071	32771	32145	24140	304883	228753
1962-63	169345	124270	79865	57168	48528	37282	35493	26336	333231	245056
1963-64	186173	129132	89873	60251	57710	42335	39387	27623	373143	259341
1964-65	201811	135447	94616	62232	66010	46045	41693	28034	404130	271758
1965-66	212116	132663	112044	68988	92952	59549	42075	26517	459187	287717
1966-67	256011	136826	139475	74946	119558	67344	49745	27467	564789	306583
1967-68	269458	143855	154571	80873	132192	73096	52369	28217	608590	326041
1968-69	285215	149216	165457	84861	135666	72989	56085	29591	642423	336657
1969-70	304756	154557	176975	88641	146306	74243	60666	30772	688703	348213
1970-71	325061	153421	226498	105253	173114	82266	71232	33499	795905	374439
1971-72	350895	159398	248800	110702	194812	89203	79254	35935	873761	395238
1972-73	388232	163613	277818	115440	215717	92036	88178	37470	969945	408559
1973-74	453125	168024	319140	118282	251695	92931	100850	37537	1124810	416774
1974-75	605835	175913	431234	123069	342292	100539	136400	40143	1515761	439664

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Notes: 1. Estimates of Capital at Current and Constant Prices are derived from Table 4.4 and 4.5 respectively as explained in the test.

2. Capital comprises of buildings, plant machinery and other fixed assets and inventories expressed at current and constant prices.