

(I) INDUSTRIAL DEVELOPMENT**Introduction**

The trend of industrial growth during the period 1960-63, based on actual production statistics for a large number of manufacturing firms, confirms the sharp rise in the tempo of industrial activity during 1962 as stated in the Bank's Annual Report for that year. The data now available disclose a three-fold increase in the rate of growth in 1962 over that for the preceding year. In 1963 the total value of industrial production continued to expand, though the high rate of increase in 1962 was not maintained; the rate of industrial growth in 1963 was 11.3% compared with 16.9% in 1962. The absolute increases in the total value of industrial production were Rs. 44.0 million in 1963 and Rs. 56.3 million in 1962. If the 'Miscellaneous Food Preparations' industry (which consists very largely of oil milling and the manufacture of desiccated coconut and has a high weightage in the production totals given in the table) is excluded, so as to limit the comparison of industrial growth rates to the new lines of manufacturing activity, the rates of increase in 1962 and 1963 are respectively 30.0% and 18.4%.

Industrial employment expanded very markedly between 1961 and 1963, the total number of employees increasing by 6.3 thousand, or by nearly 30%, over the period. Nearly two-thirds of this increase was due to an expansion in four industries, viz. Garments, Miscellaneous Food Preparations, Miscellaneous Chemical Products, and Biscuits and Confectionery. The bulk of the total increase in employment, however, occurred in 1962, when 3.9 thousand were newly employed. The rate of increase in the number of industrial employees in this year was 19.4% compared with 10.2% in 1963.

For industries where employment is irregular owing to absenteeism or other causes, the number of man-days worked is a better measure of the actual level of employment than the average number of employees in each year. The distribution of man-days as between industries and the annual increases in man-days worked, however, differ slightly from the employment pattern based on the number of employees. Increases in the number of employees and in man-days worked conform also with increases in the industrial wage bill. But significant differences are observable in a comparison of the distribution of the total wage bill between industries with the distribution of employees and of the man-days worked. As seen from Table I these differences reflect inter-industry variations in the wage per man-day. Thus in the Garments and the "Biscuits and Confectionery" industries, the share of the total wage bill is smaller than their share of both the total number of employees and the total man-days worked, because wage rates in these industries are lower than in others. The Garments industry is characterised by a high proportion of female employees who earn relatively low wages.

Changes in the Value and Composition of Industrial Output

A classification of industrial production by the major economic categories (see Table III) shows that in 1963 Consumer Goods represented 63.7% of total value, Intermediate Goods 29.3% and Investment Goods 7.0%¹. The value of each of these categories increased during the period 1960-63, Consumer Goods increasing by 62%, Investment Goods by 22% and Intermediate Goods by 6%. These disproportionate rates of increase have altered the relative weightage of the three categories in the total value of industrial production. The share of Consumer Goods increased markedly from 1960, while that of Intermediate Goods declined, the share of Investment Goods remained almost unchanged.

1. Investment Goods considered in this survey have a smaller coverage than the other two categories. Among the investment goods excluded owing to the lack of reliable data are bricks and tiles.

INDUSTRIAL PRODUCTION AND EMPLOYMENT 1960-1963
STATISTICAL SUMMARY

TABLE I

	No. of Firms				No. of Employees				Total Man-days (Th.)				Wage Bill (Rs. Mn.)				Production Value (Rs. Mn.)				Wage per Man-day (Rs.)				Man-days per Employee			
	1960	1961	1962	1963	1960	1961	1962	1963	1960	1961	1962	1963	1960	1961	1962	1963	1960	1961	1962	1963	1960	1961	1962	1963	1960	1961	1962	1963
I. MISCELLANEOUS FOOD PREPARATIONS	47	52	57	60	2,472	2,624	3,151	3,433	606	664	797	871	4.5	4.7	5.4	5.8	144.0	146.9	147.8	147.6	7.40	7.08	6.77	6.62	245	253	253	254
II. PRESERVED AND CANNED FRUIT AND VEGETABLES	8	9	14	16	120	149	208	238	34	42	58	67	0.1	0.2	0.2	0.3	1.3	1.6	2.3	3.4	3.94	3.95	4.16	4.30	283	282	279	282
III. BISCUITS AND CONFECTIONERY	22	39	49	62	907	1,302	1,699	2,065	280	395	487	591	1.0	1.3	1.6	2.3	11.5	18.2	21.9	28.8	3.63	3.36	3.36	3.94	309	303	287	286
IV. AERATED WATERS	17	23	24	25	860	939	949	988	252	273	275	284	2.0	2.1	2.1	2.1	8.3	7.8	10.0	11.4	7.94	7.62	7.56	7.54	293	291	290	287
V. BEER AND STOUT	1	1	1	1	187	198	309	303	58	61	67	68	0.3	0.3	0.4	0.4	3.1	2.4	2.2	2.4	5.27	5.34	5.19	5.45	308	308	309	303
VI. TOBACCO	23	23	23	23	3,574	3,664	3,955	3,960	975	1,023	1,104	1,104	8.2	8.3	9.2	9.6	30.0	29.0	35.0	39.0	8.41	8.12	8.37	8.66	273	279	279	279
VII. GARMENTS	22	24	32	34	2,606	2,787	3,947	4,500	768	816	1,102	1,261	2.6	2.9	3.9	4.3	19.4	19.8	29.3	38.4	3.40	3.56	3.56	3.43	295	293	279	280
VIII. FOOTWEAR AND LEATHER PRODUCTS	9	9	10	11	1,383	1,289	1,421	1,616	365	348	373	419	2.2	2.4	3.0	3.3	8.3	8.5	19.6	22.3	6.09	6.80	7.96	7.86	264	270	262	259
IX. MISCELLANEOUS CHEMICAL PRODUCTS	30	37	56	70	1,569	1,740	2,070	2,498	426	492	609	673	2.2	3.2	3.8	4.6	36.4	40.3	51.5	56.0	5.68	7.25	6.33	6.90	267	282	295	270
X. ARTICLES OF PAPER AND PAPERBOARD	19	21	28	33	804	892	1,139	1,316	198	226	300	374	1.7	2.0	2.5	2.9	12.5	13.9	15.4	18.3	8.68	8.77	8.29	7.70	246	253	263	284
XI. METAL PRODUCTS	20	23	26	28	496	593	770	876	137	166	217	240	0.7	0.9	1.3	1.2	7.4	9.1	11.2	15.1	4.56	4.98	5.11	5.17	260	279	272	270
XII. MANUFACTURED PRODUCTS, N.E.S.	23	30	41	44	323	499	616	671	87	137	167	191	0.3	0.5	0.6	0.8	1.5	3.7	4.3	5.8	3.23	3.56	3.75	4.11	270	275	271	285
XIII. CERAMICS	1	1	1	1	178	193	240	261	53	57	66	81	0.4	0.4	0.5	0.6	1.0	1.1	1.9	2.5	7.29	7.46	7.95	7.79	297	294	276	259
XIV. RUBBER PRODUCTS EXCLUDING FOOTWEAR	15	18	20	20	833	964	1,022	1,177	232	264	293	377	1.3	1.5	1.7	2.3	6.8	8.3	10.9	13.7	5.43	5.63	5.81	6.10	279	279	287	320
XV. PLYWOOD	1	1	1	1	370	490	554	579	123	153	177	185	0.8	0.9	1.4	1.4	2.3	2.9	3.4	3.9	6.50	6.10	7.65	7.65	332	313	320	320
XVI. MINERAL SANDS	1	1	1	1	47	91	102	83	13	25	33	23	0.2	0.2	0.3	0.2	—	0.1	0.1	0.1	12.02	8.49	7.95	6.81	287	276	324	282
XVII. BASIC INDUSTRIAL CHEMICALS	1	1	1	1	168	164	197	199	50	49	59	62	0.4	0.4	0.5	0.5	—	0.2	1.1	1.2	7.40	7.82	7.60	7.61	297	297	301	311
XVIII. CEMENT AND CEMENT PRODUCTS	2	2	2	2	1,542	1,410	1,512	1,541	457	414	442	440	3.5	3.1	3.4	3.4	19.6	17.9	20.2	22.5	7.80	7.80	7.80	7.79	312	312	312	312
TOTAL	262	315	387	433	18,439	19,988	23,861	26,304	5,114	5,605	6,620	7,301	32.4	35.3	41.8	46.0	313.4	331.7	388.0	432.4	6.22	6.19	6.31	6.30	277	280	277	278

Source: Central Bank of Ceylon.

TABLE II

Value of Industrial Production, 1960-63, Classified by Type of Industry and by Principal Products

	Value (Rs. Mn.)				% within Industry				% of Total Industrial Production			
	1960	1961	1962	1963	1960	1961	1962	1963	1960	1961	1962	1963
I. MISCELLANEOUS FOOD PREPARATIONS	144.0	146.9	147.8	147.6	100.0	100.0	100.0	100.0	46.5	44.3	38.1	34.2
Dairy Products	1.9	3.5	3.0	4.1	1.3	2.4	2.0	2.8	0.6	1.1	0.8	0.9
Cattle and Poultry Foods	17.1	17.3	18.4	19.6	11.9	11.8	12.4	13.3	5.5	5.2	4.7	4.5
Desiccated Coconut	13.4	8.8	11.4	11.0	9.3	6.0	7.7	7.5	4.3	2.7	2.9	2.5
Edible Oils and Fats	104.8	111.7	110.7	109.0	72.8	76.0	74.9	73.8	33.4	33.7	28.5	25.2
Salt	4.2	2.7	0.7	0.4	2.9	1.8	0.5	0.3	1.3	0.8	0.2	0.1
Ice	1.3	1.2	1.4	1.1	0.9	0.8	0.9	0.7	0.4	0.4	0.4	0.3
Other	1.3	1.7	2.2	2.4	0.9	1.2	1.5	1.6	0.4	0.5	0.6	0.6
II. PRESERVED AND CANNED FRUIT AND VEGETABLES	1.3	1.6	2.3	3.4	100.0	100.0	100.0	100.0	0.4	0.5	0.6	0.8
Jams, Jellies, Sauces etc.	0.4	0.5	0.9	2.2	30.8	31.3	39.1	64.7	0.1	0.2	0.2	0.5
Other	0.9	1.1	1.3	1.2	69.1	69.7	61.8	35.2	0.3	0.3	0.3	0.3
III. BISCUITS AND CONFECTIONERY	11.5	18.2	21.9	28.8	100.0	100.0	100.0	100.0	3.7	5.5	5.6	6.7
Biscuits	6.2	10.5	12.7	15.7	53.9	57.7	58.0	54.5	2.0	3.2	3.3	3.6
Boiled Sweets	3.9	3.4	5.1	6.6	33.9	18.7	23.3	22.9	1.2	1.0	1.3	1.5
Chocolate and Toffees	—	0.7	1.3	3.1	—	3.8	5.9	10.8	—	0.2	0.3	0.7
Other	1.5	3.5	2.8	3.4	13.0	19.2	12.8	11.8	0.5	1.1	0.7	0.8
IV. AERATED WATERS	8.3	7.8	10.0	11.4	100.0	100.0	100.0	100.0	2.6	2.4	2.6	2.6
V. BEER AND STOUT	3.1	2.4	2.2	2.4	100.0	100.0	100.0	100.0	1.0	0.7	0.6	0.6
VI. TOBACCO	30.0	29.0	35.0	39.0	100.0	100.0	100.0	100.0	9.6	8.7	9.0	9.0
VII. GARMENTS	19.4	19.8	29.3	38.4	100.0	100.0	100.0	100.0	6.2	6.0	7.6	8.9
Shirts	7.1	7.3	14.2	20.7	36.6	36.9	48.5	53.9	2.3	2.2	3.7	4.8
Other (mainly Banians)	12.3	12.5	15.1	17.7	63.4	63.1	51.5	46.3	3.9	3.8	3.9	4.1
VIII. FOOTWEAR AND LEATHER PRODUCTS	8.3	8.5	19.6	22.3	100.0	100.0	100.0	100.0	2.6	2.6	5.1	5.2
IX. MISCELLANEOUS CHEMICAL PRODUCTS	36.4	40.3	51.5	56.0	100.0	100.0	100.0	100.0	11.6	12.1	13.3	13.0
Pharmaceuticals (including Glycerine)	2.2	2.5	1.9	4.2	6.0	6.2	3.7	7.5	0.7	0.8	0.5	1.0
Cosmetics	1.6	1.7	3.5	5.6	4.4	4.2	6.8	10.0	0.5	0.5	0.9	1.3
Soaps and cleaning compounds	26.9	28.1	35.1	34.0	73.9	69.7	68.2	60.7	8.6	8.5	9.0	7.9
Matches	3.0	3.8	5.6	4.5	8.2	9.4	10.9	8.0	1.0	1.1	1.4	1.0
Toothpaste	1.1	2.2	2.2	2.9	3.0	5.5	4.3	5.2	0.4	0.7	0.6	0.7
Other	1.7	2.0	3.2	4.8	4.7	5.0	6.2	8.6	0.5	0.6	0.8	1.1
X. ARTICLES OF PAPER AND PAPERBOARD	12.5	13.9	15.4	18.2	100.0	100.0	100.0	100.0	3.8	4.2	4.0	4.2
Writing Paper (including exercise books etc.)	4.8	5.1	6.8	8.9	38.4	36.7	44.2	48.9	1.5	1.5	1.8	2.1
Printing Paper	4.5	5.9	4.2	3.1	36.0	42.4	27.3	17.0	1.4	1.8	1.1	0.7
Cartons and other Packing Boxes	0.1	0.5	0.7	1.7	0.8	3.6	4.5	9.3	...	0.2	0.2	0.4
Wrapping Paper	0.7	0.5	0.5	1.2	5.6	3.6	3.2	6.6	0.2	0.2	0.1	0.3
Other	2.4	1.9	3.2	3.3	19.2	13.7	20.8	18.1	0.8	0.6	0.8	0.8
XI. METAL PRODUCTS	7.4	9.1	11.2	15.1	100.0	100.0	100.0	100.0	2.4	2.7	2.9	3.5
Aluminium Ware	3.0	4.5	5.3	7.3	40.5	49.5	47.3	48.3	1.0	1.4	1.4	1.7
Metal Containers	1.4	1.5	2.7	2.1	18.9	16.5	24.1	13.9	0.4	0.5	0.7	0.5
Barbed Wire	0.1	0.2	0.7	1.1	1.4	2.3	6.3	7.3	...	0.1	0.2	0.3
Wire Nails	1.4	1.8	1.8	2.7	18.9	19.8	16.1	17.9	0.4	0.5	0.5	0.6
Other	1.5	1.1	0.7	1.9	20.3	12.1	6.3	12.6	0.5	0.3	0.2	0.4
XII. MANUFACTURED PRODUCTS, N.E.S.	1.5	3.7	4.3	5.8	100.0	100.0	100.0	100.0	0.5	1.1	1.1	1.3
Plastics	0.7	2.0	2.5	3.1	46.7	54.1	58.1	53.4	0.2	0.6	0.6	0.7
Other	0.9	1.5	1.8	2.7	60.0	40.5	41.9	46.6	0.3	0.5	0.5	0.6
XIII. CERAMICS	1.0	1.1	1.9	2.5	100.0	100.0	100.0	100.0	0.3	0.3	0.5	0.6
XIV. RUBBER PRODUCTS EXCLUDING FOOTWEAR	6.8	8.3	10.9	13.7	100.0	100.0	100.0	100.0	2.2	2.5	2.8	3.2
Tyre Retreading	4.4	5.3	6.8	9.1	64.7	63.9	62.4	66.4	1.4	1.6	1.8	2.1
Cycle Tyres and Tubes	1.2	1.7	2.6	2.7	17.6	20.5	23.9	19.7	0.4	0.5	0.7	0.6
Other	1.2	1.3	1.5	2.0	17.6	15.7	13.8	14.6	0.4	0.4	0.4	0.5
XV. PLYWOOD	2.3	2.9	3.4	3.9	100.0	100.0	100.0	100.0	0.7	0.9	0.9	0.9
XVI. MINERAL SANDS	—	0.1	0.1	0.1	—	100.0	100.0	100.0	—
XVII. BASIC INDUSTRIAL CHEMICALS	—	0.2	1.1	1.2	—	100.0	100.0	100.0	—	0.1	0.3	0.3
XVIII. CEMENT AND CEMENT PRODUCTS	19.6	17.9	20.2	22.5	100.0	100.0	100.0	100.0	6.3	5.4	5.2	5.2
TOTAL (I-XVIII)	313.4	331.7	388.0	432.0					100.0	100.0	100.0	100.0

An overwhelming portion of the consumer goods manufactured consisted of Food, Drink and Tobacco, Miscellaneous Chemical Products, Garments, and Footwear and Leather Products; together they accounted for 85% of the value of Consumer Goods in 1963. The increase in the value of these products was particularly large between 1961 and 1963, amounting to Rs. 72.4 million, as compared with an increase of Rs. 100.6 million in the total value of industrial production in the same period. The value of intermediate goods was almost unchanged in 1963, while that of investment goods (consisting mainly of cement and cement products) increased steadily from 1961; the output of cement fluctuated narrowly around an annual value of Rs. 14.2 million, and that of cement products increased sharply.

A little less than one-half of the increase of Rs. 44.7 million in the total value of industrial production in 1963 has been due to expansion in three industries, viz., Garments, Biscuits and Confectionery, and Miscellaneous Chemical Products, showing a combined increase of Rs. 20.5 million, while four other industries—Tobacco, Metal Products, Footwear and Leather Products, and Paper and Paperboard—represented an increase of Rs. 13.4 million. Biscuits and Confectionery, Garments and the Miscellaneous Chemical products industries have spawned a large number of small firms since 1960, accounting for more than 50% of the total increase in firms. Yet the large annual spurts in production that have been a feature of this industrial group are the result of an almost phenomenal expansion in capacity of a few established firms. The bulk of the value increase was also confined to a small number of products. Thus between 1961 and 1963 the manufacture of soap (including cleaning compounds) increased by Rs. 6 million, cosmetics by Rs. 3.9 million, biscuits by Rs. 5.2 million (after an expansion of Rs. 4.3 million in 1961), confectionery by Rs. 5.6 million, and shirts by Rs. 13.4 million. The smaller firms in these industries were mainly confined to the manufacture of a differentiated range of products of low aggregate value, for example, slacks, shorts, brassiers, handkerchiefs and men's underwear in the case of the garments industry.

In the second group of industries, referred to in the preceding paragraph as contributing to the general expansion in value, the production of footwear and leather products increased in 1963 at a rate which corresponded to the overall rate of increase of industrial production for the year, but showed an abrupt fall in the absolute increase in value compared with 1962. This was due to the abnormally rapid rise in production in 1962. The expansion in capacity of the Leather Corporation in that year raised production in the industry as a whole to a level that was more or less in line with existing demand, and the further increase in production which became necessary during 1963 to meet consumption was thus relatively small. The consumption of footwear has increased markedly in recent years, and future expansion of the industry based on an internal market would seem to be contingent upon increased personal incomes and social change. An appreciable portion of the new demand in the past few years has been for low-value types of tropical footwear such as slippers and sandals.

The metal products industry has shown since 1960 a steady expansion, which became more marked in the last year of the survey. The value of production more than doubled during 1960-63. Despite a relatively small total value (Rs. 15.1 million in 1963), the industry is of particular significance for the country's economic growth; as seen from Table III, one-fourth of the total value of metal products in 1963 comprised investment goods. The goods concerned were wire nails, barbed wire and galvanised products. The value of wire nails and barbed wire manufactured in 1963 was Rs. 2.7 million compared with Rs. 1.4 million in 1960. Corresponding to this increase in domestic output there has been a fall in the import of these two products. A relatively small margin of value added has hitherto been a feature of the metal products industry (particularly the manufacture of aluminium ware), which in 1963 represented nearly one-half of the value of output of the industry. The proportion of wage payments of firms producing mainly aluminium ware was

TABLE III

Value of Industrial Production, 1960-63
By Major Economic Categories

	Rs. Mn.				Per Cent			
	1960	1961	1962	1963	1960	1961	1962	1963
A. CONSUMER GOODS:	170.3	186.6	236.1	275.1	54.3	56.3	60.8	63.7
FOOD, DRINK AND TOBACCO:	87.8	94.8	105.0	119.1	28.0	28.6	27.1	27.6
Miscellaneous Food Prepara- tions (1)	33.6	35.8	33.6	34.1	10.7	10.8	8.7	7.9
Preserved and canned Fruit and Vegetables (2)	1.3	1.6	2.3	3.4	0.4	0.5	0.6	0.8
Biscuits and Confectionery	11.5	18.2	21.9	23.8	3.7	5.5	5.6	6.7
Aerated Waters	8.3	7.8	10.0	11.4	2.6	2.4	2.6	2.6
Beer and Stout	3.1	2.4	2.2	2.4	1.0	0.7	0.6	0.6
Tobacco	30.0	29.0	35.0	39.0	9.6	8.7	9.0	9.0
GARMENTS (3)	19.4	19.8	29.3	38.4	6.2	6.0	7.5	8.9
FOOTWEAR AND LEATHER PRODUCTS	8.3	8.5	19.6	22.3	2.6	2.6	5.0	5.2
MISCELLANEOUS CHEMICAL PRODUCTS (4)	36.4	40.3	51.5	56.0	11.6	12.1	13.3	13.0
ARTICLES OF PAPER AND PAPERBOARD (5)	7.2	7.0	10.0	12.2	2.3	2.1	2.6	2.8
METAL PRODUCTS (6)	3.0	4.5	5.3	7.3	1.0	1.4	1.4	1.7
MANUFACTURED PRODUCTS N.E.S. (7)	1.5	3.7	4.3	5.8	0.5	1.1	1.1	1.3
CERAMICS	1.0	1.1	1.9	2.5	0.3	0.3	0.5	0.6
RUBBER PRODUCTS (8)	5.7	6.9	9.2	11.5	1.8	2.1	2.4	2.7
B. INTERMEDIATE GOODS	119.4	122.7	126.9	126.8	38.0	37.0	32.7	29.3
MISCELLANEOUS FOOD PREPARATIONS (9)	110.4	111.1	114.2	113.5	35.2	33.5	29.4	26.2
METAL PRODUCTS (10)	1.4	1.5	2.7	2.1	0.4	0.4	0.7	0.5
ARTICLES OF PAPER AND PAPERBOARD (11)	5.3	6.9	5.4	6.0	1.7	2.1	1.4	1.4
PLYWOOD	2.3	2.9	3.4	3.9	0.7	0.9	0.9	0.9
MINERAL SANDS	—	0.1	0.1	0.1	—	—	—	—
BASIC INDUSTRIAL CHEMI- CALS (12)	—	0.2	1.1	1.2	—	0.1	0.3	0.3
C. INVESTMENT GOODS	23.7	22.4	25.1	30.4	7.7	6.7	6.5	7.0
METAL PRODUCTS (13)	3.0	3.1	3.2	5.7	1.0	0.9	0.8	1.3
RUBBER PRODUCTS (14)	1.1	1.4	1.7	2.2	0.4	0.4	0.4	0.5
CEMENT AND CEMENT PRO- DUCTS	19.6	17.9	20.2	22.5	6.3	5.4	5.2	5.2
TOTAL	313.4	331.7	388.0	432.0	100.0	100.0	100.0	100.0

Source: Central Bank of Ceylon.

Notes:—

- (1) Dairy Products (including Ice-cream), Edible oils and Fats, &c.
- (2) Jams, Jellies, Sauces, Fruit Cordials &c.
- (3) Shirts, Banians, &c.
- (4) Pharmaceuticals, Cosmetics, Soaps and Cleaning compounds, Matches, Toothpaste, &c.
- (5) Writing Paper, exercise books etc.
- (6) Aluminium-ware.
- (7) Plastic Goods, &c.
- (8) Tyre-retreading, Cycle tyres and tubes, Toys and Household goods.
- (9) Cattle and Poultry food, Oils and Fats, Ice, Desiccated Coconut &c.
- (10) Containers.
- (11) Printing Paper, Cartons and other packing boxes and wrapping paper.
- (12) Caustic Soda and Chlorine.
- (13) Barbed wire, Wire nails, Galvanised products, &c.
- (14) Tyre-retreading.

less than 9% of the value of output of about Rs. 7 million. The reason for this low wage ratio are the high raw material content of output and the high capital-intensity of the production techniques.

The manufacture of articles of paper and paperboard has continued to expand since 1960 with an appreciable quickening in the rate of increase during 1963. Of a total value of Rs. 18.2 million in 1963, two-thirds represented consumer goods (mainly writing paper including exercise books) while one-third was intermediate goods, consisting of wrapping paper, cartons and other packing material. The expansion in this industry seems complementary to developments in the consumer goods sector, in which a rising volume of sales of footwear, garments and confectionery has stimulated the demand for packaging material. (A parallel development has been the expansion in the manufacture of metal containers for industrial use). With the expansion in the output of the Paper Corporation, supplying materials for the paper packaging industry, the foreign exchange content of the total value of production in the paper goods industry is likely to become progressively small.

The rubber products industry excluding footwear expanded steadily during the period under survey; the absolute increase in output was greater in 1963 than in any previous year. The retreading of tyres (which is classified in Table III both under investment goods and under consumer goods, according to the proportion of commercial motor vehicles registered to the number of other vehicles) constituted two-thirds of the value of output of the entire industry. The remaining products of the industry are cycle tyres and tubes, and a fairly extensive range of manufactures of household goods and motor car accessories (mainly rubber bushes). The expansion of the industry in 1963 is largely due to an appreciable increase in tyre retreading, amounting to Rs. 2.3 million or a third of the total output in the preceding year. The number of tyre retreading firms appears to have become stabilized in 1962-63, and the expansion in output in these years is attributable to increased utilization of installed capacity to meet a growing demand. Imports of motor car tyres and motor cycle tyres fell steeply in 1963 by about 37% in value, and the consequent shortage of tyres available for retreading has been met recently by the import of tyre carcasses. The rubber products industry is one in which the foreign exchange content of the production value is very small, about two-thirds of the value of raw materials used in 1962 being raw rubber.

Manufactured coconut products (oil, desiccated coconut and poonac) form the overwhelming share of the Miscellaneous Food Preparations industry, contributing more than 90 per cent of its total value. The remainder is derived chiefly from dairy products (butter, ghee, cream and ice cream), which have shown an almost steady expansion since 1960. While the value of oil and desiccated coconut produced in 1963 fell only slightly, there was a larger decline in output due to the reduced availability of coconuts. The net earnings from oil milling and desiccated coconut, however, were relatively unaffected by the shrinkage in output and, in the case of coconut oil, by a higher cost of copra to the millers, because of a rise in the export prices of these commodities.

The Pattern of Industrial Concentration

Differences in the size of manufacturing establishments, as between branches of industry and in relation to changes in size over time, are an important aspect of a developing industrial pattern. Tables IV and V show the distribution of manufacturing firms in 1963, based on the value of output and on the wage bill of each firm. For a comparison of industries for which sufficient data are available, firms have been classified by certain critical levels of output and wages and having regard to sharp discontinuities in the size distribution. Three ranges of output are distinguished, the firms in each of these being regarded respectively as small, medium and large. The size of firms refers to their actual operating capacity in 1963 and not to their full potential, about which there is little or no information.

TABLE IV

Size Distribution of Manufacturing Firms, 1963
Based on Value of Output

		Value of Output			Total
		Rs. < 250 th.	Rs. 250 th. < 2 Mn.	Rs. > 2 Mn.	
I. MISCELLANEOUS FOOD PREPARATIONS	No. of Firms % of Output	Not available			
II. PRESERVED AND CANNED FRUIT AND VEGETABLES	No. of Firms % of Output	14 25.0	1 10.4	1 64.6	16 100.0
III. BISCUITS AND CONFECTIONERY	No. of Firms % of Output	44 12.0	16 36.0	2 52.0	62 100.0
IV. AERATED WATERS	No. of Firms % of Output	20 11.5	4 31.5	1 57.0	25 100.0
V. BEER AND STOUT	No. of Firms % of Output	— —	— —	1 100.0	1 100.0
VI. TOBACCO	No. of Firms % of Output	10 3.4	9 13.6	5 83.0	24 100.0
VII. GARMENTS	No. of Firms % of Output	13 2.7	15 26.5	6 70.0	34 100.0
VIII. FOOTWEAR AND LEATHER PRODUCTS	No. of Firms % of Output	5 4.0	3 4.5	3 91.5	11 100.0
IX. MISCELLANEOUS CHEMICAL PRODUCTS	No. of Firms % of Output	49 5.7	17 20.3	4 74.0	70 100.0
X. ARTICLES OF PAPER AND PAPERBOARD	No. of Firms % of Output	17 5.8	15 50.3	1 43.9	33 100.0
XI. METAL PRODUCTS	No. of Firms % of Output	13 9.4	14 63.6	1 27.0	28 100.0
XII. MANUFACTURED PRODUCTS, N.E.S.	No. of Firms % of Output	38 57.8	5 42.2	— —	43 100.0
XIII. CERAMICS	No. of Firms % of Output	— —	— —	1 100.0	1 100.0
XIV. RUBBER PRODUCTS EXCLUDING FOOTWEAR	No. of Firms % of Output	9 9.5	8 26.7	3 63.8	20 100.0
XV. PLYWOOD	No. of Firms % of Output	— —	— —	1 100.0	1 100.0
XVI. MINERAL SANDS	No. of Firms % of Output	1 100.0	— —	— —	1 100.0
XVII. BASIC INDUSTRIAL CHEMICALS	No. of Firms % of Output	— —	1 100.0	— —	1 100.0
XVIII. CEMENT AND CEMENT PRODUCTS	No. of Firms % of Output	— —	— —	2 100.0	2 100.0
TOTAL	No. of Firms % of Output	233 6.2	108 21.1	32 72.7	373 100.0

Source: Central Bank of Ceylon.

TABLE V

Size Distribution of Manufacturing Firms, 1963

Based on Wage Bill

		Rs. < 15 Th.	Rs. 15 Th. < 50 Th.	Rs. 50 Th. < 500 Th.	Rs. > 500 Th.	Total	
I. MISCELLANEOUS FOOD PREPARATIONS	No. of Firms % of Wage Bill		Not available				
II. PRESERVED AND CANNED FRUIT AND VEGETABLES ..	No. of Firms % of Wage Bill	9 13.2	6 44.4	1 42.4	—	16 100.0	
III. BISCUITS AND CONFECTIONERY	No. of Firms % of Wage Bill	37 8.8	13 16.6	7 30.8	1 43.8	58 100.0	
IV. AERATED WATERS	No. of Firms % of Wage Bill	14 3.2	6 4.5	4 34.1	1 58.1	25 100.0	
V. BEER AND STOUT	No. of Firms % of Wage Bill	—	—	—	1 100.0	1 100.0	
VI. TOBACCO	No. of Firms % of Wage Bill		Not available				
VII. GARMENTS	No. of Firms % of Wage Bill	9 1.4	15 10.7	10 44.8	2 43.1	36 100.0	
VIII. FOOTWEAR AND LEATHER PRODUCTS	No. of Firms % of Wage Bill	5 1.2	2 1.9	2 16.7	2 80.0	11 100.0	
IX. MISCELLANEOUS CHEMICAL PRODUCTS	No. of Firms % of Wage Bill	39 4.6	18 11.3	12 42.5	1 41.7	70 100.0	
X. ARTICLES OF PAPER AND PAPERBOARD	No. of Firms % of Wage Bill	17 5.3	8 8.1	7 16.4	1 70.2	33 100.0	
XI. METAL PRODUCTS	No. of Firms % of Wage Bill	7 4.9	15 37.3	6 57.7	—	28 100.0	
XII. MANUFACTURED PRODUCTS, N.E.S.	No. of Firms % of Wage Bill	23 21.7	19 66.7	1 11.6	—	43 100.0	
XIII. CERAMICS	No. of Firms % of Wage Bill	—	—	—	1 100.0	1 100.0	
XIV. RUBBER PRODUCTS EXCLUDING FOOTWEAR	No. of Firms % of Wage Bill	5 1.8	6 7.1	8 64.2	1 26.8	20 100.0	
XV. PLYWOOD	No. of Firms % of Wage Bill	—	—	—	1 100.0	1 100.0	
XVI. MINERAL SANDS	No. of Firms % of Wage Bill	—	—	1 100.0	—	1 100.0	
XVII. BASIC INDUSTRIAL CHEMICALS	No. of Firms % of Wage Bill	—	—	—	1 100.0	1 100.0	
XVIII. CEMENT AND CEMENT PRODUCTS	No. of Firms % of Wage Bill	—	—	—	2 100.0	2 100.0	
TOTAL	No. of Firms % of Wage Bill	165 5.3	108 12.0	59 21.6	15 61.1	347 100.0	

Source: Central Bank of Ceylon.

Of the two criteria of size used in the Tables the value of output, giving the relative shares of the total output of an industry, is more useful than the wage bill as an indication of the prevailing extent of concentration in industry. Firms large in terms of the wage bill can be small in terms of output, because of differences in the capital intensity of production. Output values, influencing as they do the amount of working capital needed, may also reflect the financial strength of firms, including their capacity to have access to short-term funds. A classification by the wage (and salary) bill, on the other hand, apart from showing directly the contribution of firms to employment, may serve to indicate differences in the value added by manufacture, though a rigorous analysis of this question would require more comprehensive data including profits and depreciation as well as wages and salaries. When used for purposes of comparison of industries the wage (and salary) bill may, by itself, be also a weak indicator of the value added if there are marked variations in capital-intensity, since a relatively high ratio of capital to labour may lead to a disproportionately large share of value added accruing to capital. Subject to these difficulties of interpretation, the data have been presented in the Tables so as to provide an insight into the extent of industrial concentration.

Of the total number of manufacturing firms in 1963 for which data were available for this study, 62% were small firms with an individual annual output of less than Rs. 250 thousand, 29% were medium-sized firms (Rs. 250 th. < Rs. 2 mn.) and 9% were large firms with an output exceeding Rs. 2 million. Because of the very small share of the small firms in total output, the predominance of these firms in the industrial structure is associated with sharp inequality in the size of firms. Thus 7.5% of total value is produced by 68% of the firms, while 67% of production is concentrated among 9% of firms.

More than one half of the small firms (or 56%) is confined to 3 industries, viz. Biscuits and Confectionery, Miscellaneous Chemical products, and Manufactured products n.e.s. The typical firm in these industries (or the *median* firm) is small, representing 75% of the total number of small firms. The Biscuits and Confectionery industry is also characterized by a high concentration of production, with 2 firms accounting for 52% of the output of the industry. The degree of concentration in this industry is even greater, if a classification is made between biscuits and confectionery as the two main products. A single biscuit manufacturing firm, accounting for an overwhelming share of the total value of biscuit production, produces more than twelve times the output of the next largest firm, and thus holds a position of preponderance, both absolutely and relatively, in this section of the industry. The inequality in the distribution of production is less in confectionery than in biscuits, though a break-down by the main types of confectionery (boiled sweets, and toffees and chocolates) reveals the dominance of one or a very few firms in each of these particular markets.

A markedly high concentration of production of a somewhat different type exists in the Footwear and Leather Products industry, where 3 firms account for 92% of output. The gap between the largest producer and the next is, however, 3½ times the size of output of the latter (much narrower than in the case of 'Biscuits and Confectionery'). Unlike the case of some other industries manufacturing, for example, food and bottled drinks, where relatively high transport and handling charges permit the survival of small firms supplying localized markets, the footwear industry seems to possess the advantages of large-scale production and marketing, backed by financial strength and an ability to introduce new product designs that satisfy the vagaries of consumer taste.

A predominance of small firms is a feature of two other industries, viz., Preserved and Canned Fruit and Vegetables, and Aerated Waters. The former includes a single Government establishment producing about 65% of the total value of output. The distribution of production in the private sector of this industry, however, shows a relatively high degree of equality. The size distribution of firms manufacturing

aerated waters, on the other hand, approximates to the overall industrial pattern; a very large proportion of firms is dwarfed by a single giant producing $3\frac{1}{2}$ times the output of his nearest 'rival'. The usual disadvantages of smallness may, however, be partially offset in this industry by marketing and transport economies which localized markets afford.

Despite the existence of a moderate number of small firms, a high concentration in terms of output prevails in the garments industry, if its principal products, viz., shirts, banians and umbrellas are considered individually. (These represent 90% of the industry's output). The production of banians is largely confined to a single firm, and almost the entire production of umbrellas to another. In shirt manufacturing 73% of the output is shared by 4 out of a total of 20 firms, while two firms account for 50% of the output.

Among the remaining industries considered (excluding those where the sole producer is a State Corporation), 'Beer and Stout' is the only industry which in 1963 comprised a single firm.

Table V, classifying firms by the size of the wage bill, discloses an inequality in the size of manufacturing firms corresponding to that based on the value of their output.¹ For the industries included in Table V, 61.1% of the total industrial wages is borne by 4.3% of the firms (having an individual wage bill exceeding Rs. 500 th. a year), and 5.3% of the wage bill by 48% of the firms (with an individual wage bill of less than Rs. 15 th.). A combination of the two lowest ranges shows that 80% of the firms account for 17.3% of the wage bill. On the other hand, if the highest wage bill range is further classified, 11 firms (or less than 3% of those given in the Table) would be seen to account for a wage bill of Rs. 16.2 million or 55% of total industrial wages; of this sum Rs. 10.6 million, or a little less than two-thirds, relate to the private industrial sector.

As in the case of firms classified by the size of output, the bulk of the smallest firms in terms of the wage bill is in three industries, viz., Biscuits and Confectionery, Miscellaneous Chemical Products, and Manufactured Products n.e.s. These industries account for 60 per cent of all firms with an individual wage bill of less than Rs. 15 thousand a year. But while the resulting inequality in the size of firms is relatively small in 'Manufactured Products, n.e.s.', in which there is not a single firm with a wage bill exceeding Rs. 500 thousand, a preponderance of small firms alongside one very large firm (making for extreme inequality) is a feature of 'Biscuits and Confectionery' and 'Miscellaneous Chemical Products'. The 'Articles of Paper and Paperboard' industry shows a similar distribution, although a comparison by the size of firms may not be very appropriate for this industry because the products of the single large firm (the Eastern Paper Mills Corporation) engaged in the manufacture of paper are not closely comparable with those of the rest of the industry producing mainly paper cartons and packing boxes or exercise books.

In the Garments industry, which is also one of the more crowded industries, about 70 per cent of firms have a wage bill in the middle ranges of the classification given in the Tables, revealing a smaller degree of inequality in size. As noted in the classification of firms by the value of output, the degree of concentration is, however, much greater in each of the particular products which compose this industry than is suggested by the distribution of the wage bill among all firms in the industry. A significant feature of the Garments industry, as also of the Biscuits and Confectionery industry, is the large number of persons employed (nearly 17 per cent of the industrial workforce considered in the tables). In this industry while the size of the average firm (as represented by the *median*) is, in terms of the wage bill, larger than for the

1. The total number of firms considered in this table is less than that in Table IV showing the distribution of firms by output, the Tobacco industry being excluded. In this industry almost all the *beedy* manufacturing firms give out work on contract, and the estimation of their individual wage and employment figures is difficult.

industrial sector as a whole, the average size of firms in terms of the number of employees is even larger, owing to the relatively low wage rates in the industry (see Table 1).

For the largest firms in each industry, a comparison of their share of the value of output with the corresponding proportion of the wage bill shows that large firms generally account for a significantly higher share of their industry's output than of the wage bill. The small firms show a converse relationship. The tendency for large firms to have a larger share of output than of the wage bill is very marked in the 'Preserved and Canned Fruit and Vegetables', 'Miscellaneous Chemical Products', 'Metal Products', and 'Footwear and Leather Products' industries. The largest of the fruit and vegetables preserving and canning firms produces 65% of the value of total output but has a wage bill of only 42%. In the miscellaneous chemical products industry the largest firm has 58% of the output and 42% of the wage bill. In the metal products industry the three largest firms account for 44% of total output and 24% of the wage bill. Finally, in the footwear and leather products industry a single firm manufactures 63% of the output whilst having a wage bill of 55%.

The low ratio of wage payments to the value of output for these firms would seem to indicate that the large firm is organizationally more efficient and/or that its manufacturing techniques are more mechanised (resulting in higher labour productivity). Such possibilities assume, of course, that there are no significant variations between firms in the raw material content of the value of output or in wage rates. For a few industries the latter assumption is less realistic than the former, as seems evident from a study of the Garments industry, which is an exception to the general relationship between the proportion of wage payments and the proportion of output. A possible reason for this exception is that variations in capital intensity of production as between the small and the large firms in this industry are small. A second reason, however, for which there is better evidence, is that the small firms give out a substantial amount of work on contract at rates of payment, which if expressed in terms of wages, are much lower than for regular factory employees of the larger firms. Such a pattern of employment, whereby the small garments manufacturing firms carrying relatively few permanent or whole-time employees cuts overhead costs to a minimum, involves a saving in wage payments especially where a regular level of production throughout the year cannot be maintained.

A corollary to this pattern of wage rates, which was observed in certain industries (particularly in tyre-retreading) is that the larger and more mechanized firms tend to have a lower wage per man-day than the smaller and less mechanized firms. Since modern machinery is a substitute for labour skills as well as for exacting physical toil, the smaller firm with less machinery or older equipment may tend to employ at higher wage rates labour capable of both greater physical exertion and manual skills. (Such differences in wage rates between the small and the large firms may be partially offset, however, by fringe benefits and other welfare amenities borne by most large firms; the value of such payments is not included in the wage bill shown in the tables).

APPENDIX

Note on Statistical Sources

The account of industrial trends contained in this section is based on figures of production and employment during 1960-63 for individual manufacturing firms. The total number of firms including the state Industrial corporations for which data have been tabulated is 433 for 1963, with fewer firms for the preceding years. These firms have been classified into 18 industries. Except for edible oils and fats (mainly coconut oil and desiccated coconut) shown under 'Miscellaneous Food Preparations', the industries taken into account represent the new lines of manufacturing activity which characterise present industrial development.

The employment data (comprising mainly the average number of employees, total man-days worked, and the wages and salaries bill) in respect of employees covered by the Employees' Provident Fund Act, were obtained from the detailed returns submitted to the Fund, and the data for all other employees from a questionnaire addressed by the Bank to their firms. Since employment not covered by the Employees' Provident Fund relates (apart from employees for whom private provident funds exist) to firms with less than three employees and also to casual labour and contract work, the Employees' Provident Fund data, while reflecting a high proportion of the industrial work force, excludes many small firms. For firms giving out work on contract (mostly in the Garments industry and in *beedi* manufacturing) and also for certain other firms employment figures, in terms of the number employed, man-days worked, etc., were estimated from information obtained from the firms themselves. The Employees' Provident Fund returns do not distinguish the manufacturing side of a business from its purely trading or other activities, and therefore the data for certain firms obtained from this source were adjusted in order to relate employment to the categories of manufactured products included in the present study.

The bulk of the production data, showing the value of output of the principal manufactured products, was also obtained directly from the firms, the remainder from the Ministry of Commerce and Industries. The production values purport to be the cost of factory production (representing the sum of factor incomes including normal profits), but in the case of firms manufacturing more than one product difficulties of costing and of cost allocation between products obliged many of these firms to furnish sale values. In a few cases only could the latter figures be scaled down with reasonable certainty so as to reflect their production values. Generally the figures furnished by firms were retained. In the result, the total value of industrial production may seem somewhat over-estimated.

The information which the Bank obtained directly from firms was the result of a postal questionnaire addressed to a comprehensive list of manufacturing firms, compiled partly from the records of the Ministry of Commerce and Industries and partly from the records of 'Actual User' import licences issued by the Department of Import Control in 1963. In the case of firms situated in Colombo and the suburbs the postal questionnaire was supported by the visits of investigators. The non-responsive firms, and those whose returns had to be discarded because of apparent unreliability or inconsistencies, are believed to be of not much consequence, either individually or in the aggregate, and their exclusion from the survey is unlikely to impair the validity of the overall results. These results would seem sufficient for judging the magnitude of industrial output and employment in the different industries included in the study, and for providing a somewhat firm indication of both the emerging industrial pattern and the annual growth rates of industry since 1959.