

## CHAPTER II.—WHOLESALE PRICES AND PRICE INDEXES.

### § 1.—General.

The data on which this chapter is based relate almost entirely to wholesale prices in Melbourne. An index of Sydney wholesale prices is compiled by the Government Statistician of New South Wales, and published in the *Year Book* and the *Monthly Summary of Business Statistics* of that State.

The index of Melbourne wholesale prices was first computed in 1912, and has been continued on the same lines since that year. It was resolved, however, at the Conference of Statisticians at Brisbane in 1930 that the time had come to revise and extend the items included in order to bring the index into line with changed conditions. An investigation to that end was commenced, and in the course of the past few years, many new price-series have been collected on a monthly basis back to January, 1928. Some of these have been incorporated in a new index of the prices of basic materials and foodstuffs, preliminary index-numbers of which are currently published in the *Monthly Review of Business Statistics*. Others are being incorporated in a number of "special-purpose" indexes, which it is hoped to publish shortly. Their construction has been delayed in order to make use, for weighting purposes, of the larger amount of information which is now becoming available as the result of the collection of more extensive statistics of factory production. In the meantime, the original index has been continued on existing lines.

The scope of this wholesale price index can best be understood by an examination of the list of commodities included which is given on page 42. This list is, to a large extent, comparable with that used in the compilation of the *Economist* and *Statist* index-numbers for Great Britain, but differs largely from that used for the wholesale price index-numbers of the United States (Bureau of Labour) or Canada (Department of Labour).

The items included in the (old) Melbourne wholesale price index comprise chiefly basic materials which in the form of raw material, food, or as a source of power, enter into production for home consumption. The purpose of the index, therefore, is to measure the changes in the prices of these particular materials rather than the changes in prices generally. As Australia does not, to any extent, manufacture from imported raw materials commodities for export, the local consumption appears to give the most appropriate weighting. Any lack of uniformity in the variations of the index-numbers for these wholesale prices and for retail prices would indicate broadly changes in the relation of manufacturing and distributing charges to the cost of basic materials.

### § 2.—The Grouping of the Commodities.

The commodities are divided into eight groups, as set out on page 42. The descriptions of the groups are given in the following tables with the proportional cost of each group for the year 1938. These proportions may be used with fair accuracy as "weights" to combine any group index-numbers at the present time, but would give unsatisfactory results if used for a time when prices were relatively much different.

## Groups of Commodities.

Group.	Description.	Percentage of Aggregate Cost (1938).
I.	"Metals and Coal" .. .. .	14
II.	"Wool, Cotton", also jute, leather, &c. ..	11
III.	"Agricultural Produce" .. .. .	30
IV.	"Dairy Produce" .. .. .	9
V.	"Groceries" .. .. .	16
VI.	"Meat" .. .. .	12
VII.	"Building materials" (mostly timber) ..	7
VIII.	"Chemicals" (excluding fertilizers) ..	1

It will be noticed that the group "Chemicals" is practically negligible.

The index relates chiefly to basic materials, but a certain proportion of Australian manufacturing costs enters into all groups. The amount is small in Meat (VI.), Agricultural Produce (III.), and Wool, Cotton (II.), and greater in others, but the difference is not sufficient to justify any inference as to different changes of the price-level for manufactured goods and farm products. The number and weight of manufactured commodities included are too small to warrant deductions of this nature from any possible grouping.

Many of the commodities included are affected by the tariff. Wool, Cotton (II.), Agricultural Produce (III.), and Meat (VI.), are little affected, and Dairy Produce (IV.) not greatly, but in the other groups the tariff is a dominating influence.

Melbourne Wholesale Price Index : Commodities included, Units of Measurement, and "Mass-Units."

Commodity.	Quality.	Unit.	Mass Unit.	Commodity	Quality.	Unit.	Mass Unit.
GROUP I. (Metals and Coal).				GROUP II (Wool, Cotton, also Jute, Leather, &c.)			
Iron—				Branbags ..	..	doz.	110
Pig ..	Mixed Nos.	ton	6½	Cornsacks ..	..	"	250
Rod and Bar	Stafford	"	3½	Woolpacks ..	..	each	200
Angle ..	"	"	3½	Leather—			
Plate ..	"	"	3	Chrome Box	..	ft	1,200
Hoop ..	"	"	½	Hide			
Galvanized	26 gauge	"	5	Rough Tanned	..	lb.	600
Fencing Wire	No. 8	ton	6	Split			
Tinned Plates	I C. Coke	box	60	Sole Leather—	..	"	600
Zinc, sheet		ton	1	Factory			
Lead, sheet		"	½	Sides			
" pipe		"	½	Cotton ..	Raw ..	"	24,000
Copper, sheet		lb	2,000	Wool ..	Greasy ..	"	12,200
Quicksilver		"	12	Twine ..	Reaper	"	150
Coal ..	Newcastle, on wharf	ton	600		and Binder		
				Tallow ..	Mutton Prime	ton	11

Melbourne Wholesale Price Index : Commodities included, Units of Measurement, and "Mass-Units"—continued.

Commodity.	Quality.	Unit	Mass Unit.	Commodity.	Quality	Unit	Mass Unit.
GROUP III. (Agricultural Produce).				GROUP V.—continued. (Groceries)—continued.			
Wheat ..	..	bushel	500	Starch ..	Coleman's	lb.	100
Flour ..	..	ton	48	..	White	..	..
Bran ..	..	..	14	Blue ..	Keon's	..	50
Pollard ..	..	..	14	Matches ..	Australian	gross	90
Oats ..	Milling ..	bushel	1,200	..	Safety	..	..
Oatmeal ..	Colonial	ton	1½	Candles ..	Rangoon	lb.	1,600
Barley ..	English	bushel	150	Tobacco ..	..	..	1,300
..	Cape ..	..	100	Kerosene ..	..	gallon	1,700
Maize ..	..	..	1,000	GROUP VI. (Meat).			
Hay ..	Best Mngr.	ton	135	Beef ..	Average	100 lb.	390
Chaff ..	Prime ..	..	135	Mutton ..	quality	lb.	33,000
Straw ..	Victorian	..	25	Lamb ..	..	..	5,600
Peas ..	..	bushel	55	Veal ..	..	..	7,000
Potatoes ..	..	ton	40	Pork ..	..	..	3,700
Malt ..	Victorian	bushel	140	GROUP VII. (Building Materials).			
Onions ..	..	ton	5	Timber—	Flooring—	100 ft lin	30
GROUP IV. (Dairy Produce)				..	6 x 1½	..	30
Ham ..	..	lb.	800	..	6 x 1	..	30
Bacon ..	..	..	3,200	..	6 x ½	..	30
Cheese ..	..	..	1,500	..	6 x ¼	..	30
Butter ..	Best Fresh	..	9,500	..	Weather-	boards	200
Lard ..	Bulk	..	200	Oregon	1,000 ft.	..	20
Eggs ..	Ordinary	doz.	1,800	sup.	..	..	10
Honey ..	..	lb.	600	Shelving	..	..	30
Beeswax ..	..	..	40	Cement ..	Portland	cask	30
Condensed Milk	Bacchus Marsh	doz. lb.	160	White Lead ..	..	ton	½
GROUP V. (Groceries).				Slates ..	Welsh	1,000	½
..	..	..	..	..	20 x 10	..	..
Currants ..	..	lb.	1,400	GROUP VIII. (Chemicals).			
Raisins ..	Sultanas	..	1,400	Cream of Tartar	In kegs	lb.	400
Herrings ..	1-lb. fresh	doz 1-lb.	50	Bi-Carbonate of Soda	..	ton	½
..	..	tins	..	Saltpetre ..	Refined	..	1-20
Salmon ..	1-lb. tall	..	50	Sulphur ..	..	..	..
..	Alaska	..	..	Caustic Soda ..	..	cwt.	..
Sardines ..	Halves	doz. halves	100	Alum ..	Lump ..	ton	..
Tea ..	..	lb.	3,000	Potassium	..	lb	370
Coffee ..	Plantation	..	200	Cyanide	..	..	..
Cocoa ..	McKenzie's	..	100	..	..	..	..
Sugar ..	No 1A	ton	22	..	..	..	..
Macaroni ..	..	lb.	200	..	..	..	..
Tapioca ..	..	cwt.	7	..	..	..	..
Rice ..	..	ton	2	..	..	..	..
Salt ..	Australian	..	7	..	..	..	..
..	fine	..	..	..	..	..	..
Salt ..	Rock	..	1	..	..	..	..
Mustard ..	Coleman's	doz. 1-lb.	6	..	..	..	..

## § 3. Index-Numbers.

Index-numbers for each group of commodities, as well as for all groups combined, are shown in the following table:—

## Melbourne Wholesale Price—Index-Numbers, 1861 to March, 1939.

(Base of each Group: Year 1911 = 1,000.)

Period	I Metals and Coal.	II. Wool, Cotton, Leather, &c	III. Agricul- tural Pro- duce, &c.	IV. Dairy Produce.	V. Grocer- ies.	VI. Meat.	VII. Building Materials.	VIII. Chemical- s.	All Groups.
1861 ..	1,438	1,381	1,583	1,008	1,963	..	1,070	2,030	1,538
1871 ..	1,096	1,257	1,236	864	1,586	..	1,044	1,409	1,229
1881 ..	1,178	1,115	1,012	935	1,421	..	1,091	1,587	1,121
1891 ..	895	847	1,024	995	1,032	888	780	1,194	945
1901 ..	1,061	774	928	1,029	1,048	1,345	841	917	974
1911 ..	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1914 ..	1,099	1,032	1,207	1,137	1,021	1,507	1,081	1,233	1,149
1915 ..	1,284	1,017	2,102	1,530	1,133	2,435	1,275	1,528	1,604
1916 ..	1,695	1,423	1,208	1,485	1,322	2,515	1,491	1,760	1,904
1917 ..	2,129	2,008	1,157	1,423	1,343	2,403	1,884	2,171	1,862
1918 ..	2,416	2,360	1,444	1,454	1,422	2,385	2,686	3,225	1,934
1919 ..	2,125	2,363	1,985	1,651	1,516	2,348	2,851	2,898	2,055
1920 ..	2,298	2,624	2,439	2,209	1,918	3,279	3,126	2,825	2,480
1921 ..	2,173	1,362	1,767	2,000	1,976	2,158	2,733	2,303	1,903
1922 ..	1,942	1,681	1,628	1,648	1,869	1,787	2,005	1,965	1,758
1923 ..	1,826	2,148	1,778	1,837	1,746	2,579	2,025	1,933	1,944
1924 ..	1,835	2,418	1,647	1,655	1,721	2,223	1,815	1,806	1,685
1925 ..	1,852	1,967	1,797	1,656	1,723	2,212	1,711	1,790	1,844
1926 ..	1,938	1,582	2,001	1,784	1,731	1,931	1,665	1,816	1,832
1927 ..	1,962	1,650	1,826	1,823	1,724	2,111	1,624	1,866	1,817
1928 ..	1,912	1,781	1,726	1,751	1,707	2,015	1,744	1,923	1,792
1929 ..	1,912	1,556	1,792	1,853	1,690	2,246	1,754	1,943	1,693
1930 ..	1,866	1,127	1,484	1,627	1,666	2,025	1,875	1,981	1,598
1931 ..	1,826	1,039	1,131	1,399	1,794	1,508	2,025	2,166	1,428
1932 ..	1,736	1,000	1,230	1,303	1,767	1,348	2,043	2,127	1,411
1933 ..	1,713	1,118	1,175	1,195	1,714	1,487	2,061	2,106	1,469
1934 ..	1,660	1,261	1,288	1,274	1,735	1,546	2,035	2,018	1,471
1935 ..	1,662	1,217	1,344	1,325	1,729	1,508	1,984	1,996	1,466
1936 ..	1,566	1,331	1,460	1,351	1,731	1,684	1,969	1,997	1,543
1937 ..	1,772	1,406	1,604	1,451	1,750	1,678	2,430	2,006	1,656
1938 ..	1,746	1,051	1,769	1,549	1,747	1,871	2,258	2,059	1,662
1937—									
July ..	1,773	1,460	1,666	1,470	1,757	1,790	2,546	2,015	1,703
Aug. ..	1,785	1,398	1,726	1,453	1,745	1,903	2,555	2,031	1,720
Sept. ..	1,818	1,282	1,648	1,475	1,748	2,127	2,516	2,033	1,706
Oct. ..	1,793	1,189	1,648	1,481	1,752	1,940	2,429	2,033	1,684
Nov. ..	1,774	1,105	1,553	1,479	1,755	1,806	2,384	2,033	1,695
Dec. ..	1,762	1,140	1,520	1,494	1,755	1,629	2,360	2,033	1,582
1938									
Jan. ..	1,762	1,097	1,579	1,515	1,751	1,663	2,369	2,049	1,596
Feb. ..	1,754	1,093	1,602	1,520	1,743	1,675	2,344	2,047	1,600
March ..	1,733	1,079	1,590	1,522	1,743	1,755	2,350	2,059	1,603
April ..	1,751	1,054	1,639	1,545	1,754	1,827	2,359	2,059	1,624
May ..	1,730	1,037	1,731	1,570	1,744	1,818	2,399	2,059	1,641
June ..	1,728	1,010	1,753	1,594	1,745	2,005	2,256	2,059	1,661
July ..	1,744	1,054	1,645	1,568	1,746	2,084	2,180	2,063	1,726
Aug. ..	1,743	1,036	1,865	1,550	1,744	2,232	2,167	2,063	1,713
Sept. ..	1,739	1,012	1,780	1,547	1,748	2,178	2,130	2,063	1,680
Oct. ..	1,752	1,044	1,983	1,543	1,746	1,915	2,132	2,063	1,715
Nov. ..	1,749	1,052	1,692	1,552	1,752	1,695	2,134	2,063	1,698
Dec. ..	1,744	1,049	1,695	1,557	1,752	1,605	2,137	2,063	1,689
1939									
Jan. ..	1,759	1,055	2,003	1,561	1,746	1,576	2,137	2,063	1,690
Feb. ..	1,718	1,066	2,071	1,591	1,750	1,616	2,150	2,063	1,714
Mar. ..	1,753	1,073	2,002	1,573	1,736	2,112	2,145	2,063	1,764

NOTE.—The figures given in this table are comparable in the vertical columns, but are not directly comparable horizontally.

§ 4. Variations since 1914.

The variations in the index-numbers of the separate commodity groups for the years 1915 to 1938, and for each month from January, 1938, to June, 1939, are shown in the following table, taking July, 1914 as base (= 1,000) for each group:—

Melbourne Wholesale Price Index-Numbers.

(Base of each Group : July, 1914 = 1,000.)

Period.	I Metals and Coal	II Wool, Cotton, Leather, &c	III. Agri- cultural Produce, &c	IV. Dairy Pro- duce.	V. Gro- ceries.	VI. Meat	VII. Building Materials.	VIII Chem- icals.	All Groups
July, 1914 ..	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Year 1915 ..	1,166	934	2,024	1,272	1,098	1,502	1,164	1,490	1,406
" 1916 ..	1,539	1,307	1,130	1,235	1,266	1,551	1,361	1,716	1,318
" 1917 ..	1,919	1,841	1,084	1,181	1,302	1,480	1,722	2,141	1,456
" 1918 ..	2,197	2,324	1,351	1,210	1,378	1,469	2,448	3,085	1,695
" 1919 ..	1,930	2,169	1,858	1,373	1,469	1,448	2,602	2,827	1,801
" 1920 ..	2,091	2,430	2,228	1,840	1,860	2,022	2,944	2,764	2,178
" 1921 ..	1,974	1,250	1,653	1,663	1,916	1,331	2,495	2,246	1,668
" 1922 ..	1,763	1,543	1,523	1,370	1,811	1,102	1,830	1,917	1,541
" 1923 ..	1,658	1,972	1,664	1,527	1,693	1,590	1,848	1,885	1,704
" 1924 ..	1,667	2,220	1,541	1,376	1,668	1,371	1,656	1,761	1,653
" 1925 ..	1,682	1,806	1,681	1,360	1,670	1,364	1,562	1,746	1,617
" 1926 ..	1,760	1,433	1,873	1,483	1,677	1,191	1,519	1,771	1,606
" 1927 ..	1,782	1,515	1,709	1,516	1,671	1,302	1,482	1,820	1,593
" 1928 ..	1,737	1,635	1,661	1,456	1,654	1,242	1,590	1,876	1,571
" 1929 ..	1,737	1,428	1,677	1,540	1,638	1,385	1,601	1,895	1,581
" 1930 ..	1,695	1,035	1,353	1,353	1,614	1,249	1,712	1,933	1,399
" 1931 ..	1,659	954	1,049	1,163	1,738	930	1,849	2,112	1,252
" 1932 ..	1,577	918	1,152	1,083	1,712	831	1,865	2,074	1,237
" 1933 ..	1,556	1,026	1,100	994	1,661	917	1,882	2,054	1,235
" 1934 ..	1,508	1,158	1,205	1,059	1,682	950	1,839	1,968	1,290
" 1935 ..	1,456	1,116	1,258	1,100	1,677	931	1,792	1,946	1,288
" 1936 ..	1,422	1,222	1,385	1,123	1,678	1,038	1,798	1,948	1,353
" 1937 ..	1,609	1,291	1,502	1,206	1,696	1,035	2,219	1,957	1,452
" 1938 ..	1,586	965	1,674	1,287	1,693	1,154	2,043	2,068	1,457
1938—									
January ..	1,600	1,007	1,478	1,259	1,697	1,025	2,163	1,998	1,399
February ..	1,593	1,004	1,500	1,203	1,689	1,033	2,139	1,997	1,403
March ..	1,594	990	1,488	1,266	1,689	1,082	2,145	2,008	1,405
April ..	1,590	967	1,534	1,285	1,700	1,126	2,154	2,008	1,423
May ..	1,571	952	1,620	1,305	1,690	1,121	2,099	2,008	1,438
June ..	1,569	927	1,641	1,325	1,691	1,236	2,059	2,008	1,456
July ..	1,584	968	1,620	1,304	1,692	1,285	1,990	2,012	1,513
August ..	1,583	951	1,745	1,288	1,691	1,377	1,978	2,012	1,502
September ..	1,579	929	1,674	1,286	1,694	1,343	1,944	2,012	1,472
October ..	1,591	939	1,858	1,283	1,692	1,181	1,946	2,012	1,503
November ..	1,588	966	1,865	1,291	1,698	1,045	1,948	2,012	1,488
December ..	1,584	963	1,867	1,294	1,698	990	1,951	2,012	1,486
1939—									
January ..	1,597	960	1,875	1,298	1,692	972	1,951	2,012	1,482
February ..	1,560	970	1,939	1,323	1,696	996	1,962	2,012	1,502
March ..	1,592	985	1,930	1,308	1,682	1,301	1,958	2,012	1,546
April ..	1,590	948	1,698	1,336	1,687	1,314	1,956	2,012	1,481
May ..	1,590	894	1,610	1,355	1,678	1,062	1,959	2,012	1,416
June ..	1,588	940	1,580	1,322	1,694	1,051	1,921	2,032	1,410

§ 5. Prices of Commodities, 1937 and 1938.

In Section IV. of the Appendix, details are given of the average wholesale prices of the particular grades of commodities used in computing the index-numbers in the years 1937 and 1938. Corresponding information for previous years was given in the Appendixes to preceding Reports. In Report No. 1 (1912), prices are given for each year from 1871 to 1911.

### § 6. International Comparisons: Wholesale Price Index-Numbers.

The following table gives index-numbers of wholesale prices in the years 1932 to 1939 for Australia and other countries, the prices in each country for the year 1929 being taken as base (= 100). The figures, which have been taken chiefly from the *Monthly Bulletin of Statistics* published by the League of Nations, show merely the fluctuations in prices in each country, and are obviously not comparable horizontally.

#### Wholesale Price Index-Numbers: Principal Countries.

(Base: Year 1929 = 100.)

Period	UNITED KINGDOM.			BELGIUM	BRITISH INDIA (CALCUTTA).	CHINA (SHANGHAI).	DENMARK.	DUTCH EAST INDIES.	EGYPT (CAIRO).	FINLAND.	FRANCE.	GERMANY.
	Board of Trade.	" Statist. "	" Economist. "	Official.	Official.	National Tariff Commission.	Official.	Official.	Official.	Official.	Official.	Official.
1932	75	71	68	63	65	108	78	57	72	(a)	68	70
1933	75	70	68	59	62	99	83	49	61	..	64	68
1934	77	72	71	56	63	93	90	46	75	..	60	72
1935	78	74	74	53	65	92	92	43	82	100	54	74
1936	83	78	79	69	65	104	98	46	73	103	66	76
1937	95	90	89	80	72	124	110	61	76	122	93	77
1938	89	80	78	74	68	146	104	57	79	114	104	77
1938 VI	88	80	78	74	67	139	103	57	79	112	105	77
VII	88	80	78	73	67	146	103	57	79	112	104	77
VIII	87	78	76	73	67	158	102	57	78	111	104	77
IX	86	78	76	73	67	158	102	56	79	111	104	77
X	87	78	76	73	67	160	103	56	82	111	106	77
XI	86	77	74	72	67	160	102	56	81	112	108	77
XII	86	78	75	71	67	160	102	55	79	113	109	78
1939 I	85	78	74	71	67	162	102	55	78	113	110	78
II	85	78	75	70	69	166	102	56	78	113	109	78

  

Period	ITALY.	JAPAN.	NETHERLANDS.	NORWAY.	POLAND.	SWEDEN.	SWITZERLAND.	UNITED STATES.	AUSTRALIA.	CANADA.	NEW ZEALAND.	UNION OF SOUTH AFRICA.
	National Index.	Bank of Japan.	Official.	Official.	Official.	Official.	Official.	Bureau of Labour Statistics.	Official.	Official.	Official.	Official.
1932	73	73	65	82	68	78	68	68	78	70	87	79
1933	57	82	63	82	61	76	65	69	78	70	88	80
1934	65	81	63	83	58	81	64	79	82	75	89	88
1935	71	84	62	85	55	83	64	84	82	75	93	82
1936	80	90	64	90	36	86	68	85	86	78	94	85
1937	93	108	76	105	62	98	79	91	92	88	102	87
1938	100	114	72	103	58	93	76	83	92	82	102	90
1938 VI	100	116	72	103	59	93	75	82	92	84	102	..
VII	100	116	72	103	59	93	76	83	96	82	102	89
VIII	101	115	71	102	57	92	75	82	95	80	102	..
IX	102	115	71	101	57	91	75	82	93	78	102	..
X	102	115	71	101	57	91	75	81	95	78	102	89
XI	102	116	70	101	57	91	75	81	94	77	102	..
XII	101	116	71	101	57	91	75	81	94	77	104	..
1939 I	102	120	70	99	57	91	75	81	94	77	104	88
II	102	121	70	99	57	91	75	81	95	77	104	..

(a) Base: Year 1935 = 100