

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 for 1936-37 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 1937. 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 (1937).
I.	"Metals and Coal"	15
II.	"Cotton, Wool", also jute, leather, &c. ..	15
III.	"Agricultural Produce"	27
IV.	"Dairy Produce"	8
V.	"Groceries"	16
VI.	"Meat"	10
VII.	"Building materials" (mostly timber) ..	8
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 Cotton, Wool (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. Cotton, Wool (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.				GROUP II.			
Iron—				Branbags ..	..	doz.	110
Pig	Mrd. Nos.	ton	6½	Cornsacks ..	..	"	250
Rod and Bar	Stafford	"	3½	Woolpacks ..	..	each	700
Angles ..	"	"	3½	Leather—			
Plate ..	"	"	3	Chrome Box ..	..	ft.	1,300
Hoop ..	"	"	½	Hide ..	..	lb.	600
Galvanized ..	26 gauge	"	5	Rough Tanned	..	..	..
Tinned Plates ..	I.C. Coke	box	60	—Split	..	..	..
Fencing Wire ..	No. 8	ton	6	Sole Leather—	..	..	600
Zinc sheet ..	"	"	1	Factory	..	..	..
Lead sheet ..	"	"	2	Sides ..	..	..	..
" pipes ..	"	"	4	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	..	..
				Fallow ..	Mutton Prime	ton	1½

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

Commodity.	Quality.	Unit.	Mass Unit
GROUP III.			
Wheat ..	..	bushel	500
Flour ..	..	ton	48
Bran ..	..	"	14
Pollard ..	..	"	14
Oats ..	Milling..	bushel	1,200
Oatmeal ..	Colonial	ton	1½
Barley ..	English	bushel	150
..	Cape ..	"	100
Maize ..	..	"	1,000
Hay ..	Best Mngr.	ton	135
Chaff ..	Prime ..	"	135
Straw ..	Victorian	"	25
Peas ..	..	bushel	55
Potatoes ..	..	ton	40
Malt ..	Victorian	bushel	140
Onions ..	..	ton	3

Commodity.	Quality.	Unit.	Mass Unit
GROUP IV.			
Ham ..	..	lb.	800
Bacon ..	..	"	3,200
Cheese ..	..	"	1,500
Butter ..	Best Fresh	"	9,500
Lard ..	Bulk ..	"	200
Eggs ..	Ordinary	doz.	1,800
Honey ..	..	lb.	600
Beeswax ..	..	"	40
Condensed Milk ..	Bacchus Marsh	doz. lb.	160

Commodity.	Quality.	Unit.	Mass Unit
GROUP V.			
Currants ..	..	lb.	1,400
Raisins ..	Sultanas	"	1,400
Herrings ..	1-lb. fresh	doz. 1-lb.	50
..	..	tins	..
Salmon ..	1-lb. tall Alaska	"	50
Sardines ..	Halves	doz. halves	100
Coffee ..	Plantation	lb.	200
Cocoa ..	McKenzie's	"	100
Sugar ..	No. 1A	ton	22
Macaroni ..	..	lb.	200
Tapioca ..	..	cwt.	7
Rice ..	..	ton	2
Salt ..	Australian fine	"	7
..	Rock ..	"	1
Mustard ..	Coleman's	doz. 1-lb. tins	6

Commodity.	Quality.	Unit.	Mass Unit.
GROUP V—continued.			
Starch ..	Coleman's White	lb.	100
Blue ..	Keen's	"	50
Matches ..	Australian Safety	gross	90
Candles ..	Rangoon	lb.	1,600
Tobacco ..	..	"	1,300
Tea ..	..	"	3,000
Kerosene ..	..	gallon	1,700

Commodity.	Quality.	Unit.	Mass Unit.
GROUP VI.			
Beef ..	Average quality	100 lb.	390
Mutton	lb.	33,000
Veal	"	2,000
Lamb	"	5,600
Pork	"	3,700

Commodity.	Quality.	Unit.	Mass Unit.	
GROUP VII.				
Timber—	Flooring—	100 ft. lin	6 x 1½	30
	6 x 2		30	
	6 x 2½		30	
	6 x 3		30	
	Weatherboards		200	
	Oregon		1,000 ft. sup	20
..	Shelving	"	10	
Cement ..	Portland	cask	30	
White Lead ..	..	ton	½
Slates ..	Welsh 20 x 10	1,000	½	

Commodity.	Quality.	Unit.	Mass Unit.
GROUP VIII.			
Cream of Tartar	In kegs	lb.	400
Bi-Carbonate of Soda	..	ton	½
Saltpetre ..	Refined	"	1-20
Sulphur ..	..	"	½
Caustic Soda ..	..	cwt.	1
Alum ..	Lump ..	ton	½
Cyanide of Potassium	..	lb.	570

§ 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 Prices—Index-Numbers 1861 to March, 1938.

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

Period.	I Metals and Coal.	II. Cotton, Wool, Leather.	III. Agricul- tural Pro- duce, &c.	IV. Dairy Produce.	V. Grocer- ies.	VI. Meat.	VII.- Building Materials.	VIII. Chemical- icals.	All Groups.
1861 ..	1,438	1,381	1,583	1,008	1,963	..	1,070	2,030	1,530
1871 ..	1,096	1,257	1,236	864	1,586	..	1,044	1,409	1,220
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	1,253	1,149
1915 ..	1,284	1,047	2,162	1,330	1,133	2,435	1,275	1,528	1,604
1916 ..	1,695	1,423	1,408	1,485	1,322	2,515	1,491	1,760	1,504
1917 ..	2,129	2,008	1,157	1,423	1,343	2,403	1,884	2,171	1,662
1918 ..	2,416	2,360	1,444	1,454	1,422	2,385	2,686	1,225	1,934
1919 ..	2,125	2,363	1,985	1,651	1,516	2,348	2,851	2,898	2,358
1920 ..	2,298	2,624	2,439	2,209	1,918	3,779	3,226	2,845	2,480
1921 ..	2,173	1,362	1,762	1,000	1,976	2,158	2,733	2,303	1,908
1922 ..	1,942	1,681	1,628	1,648	1,869	1,787	2,005	1,965	1,750
1923 ..	1,826	2,148	1,778	1,837	1,746	2,579	2,025	1,933	1,994
1924 ..	1,835	2,418	1,647	1,655	1,721	1,723	1,815	1,806	1,885
1925 ..	1,852	1,967	1,797	1,636	1,723	2,217	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	1,942	1,803
1930 ..	1,866	1,127	1,484	1,627	1,666	2,025	1,875	1,982	1,596
1931 ..	1,826	1,039	1,421	1,399	1,794	2,025	2,025	2,166	1,508
1932 ..	2,736	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	1,409
1934 ..	1,660	1,261	1,288	1,274	1,735	1,540	2,015	2,018	1,471
1935 ..	1,602	1,217	1,344	1,325	1,729	1,568	1,964	1,996	1,469
1936 ..	1,566	1,331	1,480	1,351	1,731	1,684	1,969	1,997	1,543
1937 ..	1,772	1,406	1,605	1,451	1,750	1,673	2,430	2,006	1,856
1935—									
July ..	1,556	1,330	1,433	1,348	1,731	1,931	1,957	2,006	1,552
Aug. ..	1,547	1,318	1,497	1,334	1,721	2,120	1,964	1,994	1,585
Sept. ..	1,555	1,301	1,497	1,338	1,727	2,000	1,973	1,994	1,573
Oct. ..	1,564	1,333	1,637	1,350	1,724	1,709	2,000	1,966	1,591
Nov. ..	1,578	1,404	1,724	1,368	1,736	1,571	2,021	1,966	1,620
Dec. ..	1,589	1,438	1,713	1,366	1,740	1,428	2,043	1,966	1,611
1937									
Jan. ..	1,701	1,528	1,658	1,381	1,746	1,528	2,138	1,966	1,644
Feb. ..	1,720	1,506	1,575	1,108	1,750	1,439	2,230	1,966	1,618
March ..	1,812	1,583	1,552	1,419	1,749	1,471	2,425	1,966	1,652
April ..	1,790	1,609	1,565	1,447	1,742	1,403	2,507	1,999	1,657
May ..	1,773	1,569	1,568	1,467	1,751	1,466	2,538	1,999	1,660
June ..	1,760	1,591	1,573	1,440	1,753	1,633	2,537	1,999	1,663
July ..	1,773	1,460	1,666	1,170	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	2,510	2,033	1,706
Oct. ..	1,793	1,189	1,648	1,481	1,752	1,040	2,420	2,033	1,664
Nov. ..	1,774	1,105	1,553	1,479	1,756	1,806	2,384	2,033	1,605
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
Mar. ..	1,755	1,079	1,590	1,522	1,743	1,755	2,350	2,059	1,603

* The figures given in this table are comparable in the vertical columns, but are not directly comparable horizontally. The index-numbers are reversible.

§ 4. Variations since Outbreak of War.

The variations in the index-numbers of the separate commodity groups for the years 1915 to 1937, and for each month from July, 1936, to March, 1938, are shown in the following table, taking July, 1914, the last month before the outbreak of war, as base (= 1,000) for each group:—

Melbourne Wholesale Prices Index-Numbers.
(Base of each Group: July, 1914 = 1,000.)

Period	I. Metals and Coal.	II Cotton, Wool, Leather	III. Agricultural Produce	IV. Dairy Produce.	V. Groceries.	VI. Meat.	VII. Building Materials	VIII. Chemicals.	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	1,355	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	1,373	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	1,453	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	1,935	1,389	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	1,681	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	1,943	1,353
" 1937	1,609	1,291	1,502	1,206	1,696	1,035	2,210	1,957	1,452
1936—									
July	1,413	1,221	1,311	1,121	1,678	1,191	1,786	1,957	1,361
August	1,405	1,210	1,401	1,109	1,671	1,313	1,793	1,915	1,390
September	1,415	1,194	1,402	1,112	1,674	1,239	1,801	1,945	1,379
October	1,120	1,224	1,532	1,122	1,671	1,054	1,834	1,918	1,395
November	1,433	1,289	1,614	1,137	1,683	969	1,843	1,918	1,420
December	1,443	1,320	1,663	1,136	1,687	880	1,865	1,918	1,412
1917—									
January	1,545	1,403	1,552	1,148	1,692	912	1,952	1,918	1,441
February	1,562	1,382	1,474	1,171	1,696	887	2,036	1,918	1,410
March	1,646	1,454	1,453	1,179	1,605	907	2,214	1,918	1,449
April	1,625	1,478	1,465	1,203	1,688	865	2,288	1,949	1,452
May	1,610	1,441	1,467	1,219	1,697	904	2,317	1,940	1,455
June	1,599	1,381	1,473	1,197	1,699	1,007	2,316	1,949	1,458
July	1,610	1,340	1,559	1,222	1,703	1,104	2,324	1,965	1,493
August	1,621	1,284	1,616	1,208	1,691	1,174	2,332	1,981	1,508
September	1,651	1,177	1,543	1,227	1,694	1,312	2,297	1,983	1,495
October	1,629	1,092	1,513	1,231	1,698	1,196	2,218	1,983	1,459
November	1,611	1,015	1,454	1,230	1,702	1,114	2,176	1,983	1,407
December	1,600	1,047	1,423	1,241	1,701	1,005	2,154	1,983	1,387
1938—									
January	1,600	1,007	1,478	1,259	1,667	1,025	2,163	1,998	1,399
February	1,593	1,004	1,500	1,261	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

§ 5. Prices of Commodities, 1936 and 1937.

In Section V. 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 1936 and 1937. 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 1931 to 1938 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.

Index-Numbers, Wholesale Prices, Various Countries.

(Base: Year 1929 = 100.)

Period.	UNITED KINGDOM.			AUSTRIA.	BELGIUM.	BRITISH INDIA (CALCUTTA).	CHINA (SHANGHAI).	DENMARK.	DUTCH EAST INDIES.	EGYPT (CAIRO).	FINLAND.	FRANCE.	GERMANY.
	Board of Trade.	" Statist. "	" Economist. "	Official.	Official.	Official.	National Tariff Commission.	Official.	Official.	Official.	Official.	Official.	Official.
1931 ..	77	73	70	84	74	68	121	76	70	84	86	80	81
1932 ..	75	71	68	85	63	65	108	78	57	71	92	70	70
1933 ..	75	70	68	83	59	62	99	83	49	61	91	64	68
1934 ..	77	72	71	85	56	63	93	90	46	75	92	60	72
1935 ..	78	74	74	84	63	65	93	92	45	82	92	54	74
1936 ..	83	78	79	84	69	65	104	98	40	73	93	66	76
1937 ..	95	90	89	87	86	72	124	110	61	76	105	93	77
1937 VI.	97	92	91	87	82	72	121	111	62	75	105	89	77
VII.	98	93	92	89	83	74	120	113	63	76	105	93	78
VIII.	98	91	90	88	82	75	122	112	63	76	105	96	78
IX.	97	91	88	87	81	74	124	112	62	76	106	101	77
X.	97	88	86	87	80	75	127	113	61	77	106	100	77
XI.	95	85	83	86	78	73	134	112	58	76	104	99	77
XII.	94	85	83	85	77	72	135	111	58	76	104	101	77
1938 I.	94	85	84	86	78	71	134	110	59	76	104	101	77
II.	93	84	82	85	77	69	132	108	59	78	103	101	77

Period.	ITALY.	JAPAN.	NETHERLANDS.	NORWAY.	POLAND.	SPAIN.	SWEDEN.	SWITZERLAND.	UNITED STATES.	AUSTRALIA.	CANADA.	NEW ZEALAND.	UNION OF SOUTH AFRICA.
	National Index.	Bank of Japan.	Official.	Official.	Official.	Official.	Official.	Official.	Bureau of Labour Statistics.	Official.	Official.	Official.	Official.
1931 ..	78	70	77	82	78	101	79	78	77	79	75	91	86
1932 ..	73	73	65	82	68	99	78	68	68	78	70	87	79
1933 ..	67	82	63	83	61	95	76	65	69	78	70	88	80
1934 ..	65	81	63	83	58	97	81	64	79	82	75	90	88
1935 ..	71	84	62	85	55	101	83	64	84	82	75	94	82
1936 ..	80	90	64	90	56	..	86	68	85	86	78	95	85
1937 ..	93	108	76	105	62	..	98	79	91	92	88	94	87
1937 VI.	91	108	77	105	63	..	99	79	92	92	89	102	..
VII.	93	109	78	107	62	..	100	80	92	95	92	102	87
VIII.	93	107	78	107	62	..	100	79	92	95	90	103	..
IX.	94	108	77	108	62	..	100	78	92	95	89	102	..
X.	96	108	77	108	61	..	99	76	90	92	89	103	89
XI.	97	108	77	107	61	..	98	78	87	89	87	105	..
XII.	98	110	76	107	60	..	97	78	86	88	87	105	..
1938 I.	98	112	75	106	60	..	96	78	85	89	88	103	93
II.	97	113	74	105	60	..	96	78	84	89	87	103	..