

Weighted Average Nominal Weekly and Hourly Rates of Wages payable to Adult Female Workers and Hours of Labour, 30th April, 1914.

Industrial Groups.	Particulars.*	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Average for Six Capital Towns.
III. Food, Drink, etc.	Weekly Wage	23/0	24/7	18/9	21/0	21/3	20/0	22/6
	Working Hours	48.00	48.00	48.00	48.00	48.00	48.00	48.00
	Hourly Wage	0/5½	0/6¼	0/4½	0/5¼	0/5¼	0/5	0/5¼
IV. Clothing, Boots, etc.	Weekly Wage	25/3	24/6	22/11	21/9	35/8	23/0	24/0
	Working Hours	47.86	48.00	48.00	48.00	48.00	48.00	47.96
	Hourly Wage	0/6¼	0/6	0/5½	0/5¼	0/9	0/5¼	0/6¼
VI. All other Manufacturing	Weekly Wage	27/6	27/8	21/0	27/0	..	27/6	26/11
	Working Hours	47.41	47.90	47/1	48.00	..	48.00	47.85
	Hourly Wage	0/7	0/7	0/5¼	0/6¼	..	0/6¼	0/6½
XIII. Domestic, Hotels, etc.	Weekly Wage†	28/3	28/2	32/10	27/11	39/7	32/8	31/1
	Working Hours	52.08	51.38	55.02	52.44	49.40	58.00	52.29
	Hourly Wage	0/6½	0/6¼	0/7¼	0/6½	0/9¼	0/6¼	0/7¼
XIV. Shop Assistants, Clerks, etc.	Weekly Wage	28/9	35/6	30/0	25/0	30/2
	Working Hours	50.71	48.50	48.00	50.00	47.77
	Hourly Wage	0/6¼	0/8¼	0/7½	0/5	0/7½
All Groups	Weekly Wage	26/9	27/4	26/11	24/1	37/4	25/10	27/2
	Working Hours	49.34	48.54	49.82	49.33	48.69	50.76	49.08
	Hourly Wage	0/6¼	0/6¼	0/6¼	0/5¼	0/9¼	0/6	0/6¼

* The particulars relate to the weighted average weekly wage, working hours and hourly wage, respectively.
 † The value of Board and Lodging (estimated at 15s. per week) is included where provided, in order that the results may be comparable with the rates paid in other industries.

SECTION VIII.—VARIATIONS IN NOMINAL AND EFFECTIVE WAGES.

1. **General.**—From the beginning of the year 1913, records have been kept of all changes in rates of wages and hours of labour, the number of workers affected, and the methods by which such changes are brought about. These records have been published in the quarterly Labour Bulletins, and in Section X. hereof results are given for 1913, the first complete year for which these Statistics are available. In order to supplement the results thus obtained, investigations have been made regarding rates of wages in past years with a view to shewing their general trend in each State and in various industrial groups. The methods adopted for the collection of the data and computation of the results were explained in Report No. 2 (see pages 23-4), and will not be repeated here. The particulars given in this Section shew variations in wages from year to year in each State and in various industrial groups. Information as to current rates of wages is given in the preceding Section hereof.

The total number of occupations for which particulars are available back to 1891 is 652. In 1913, however, the scope of the investigation was extended, and particulars for that year are available for no fewer than 3948 occupations. The wages on which the index-numbers are based are, in the majority of cases, minimum rates fixed by industrial tribunals, but in some cases, particularly in the earlier years when no minimum rates had been fixed for many trades, either union or predominant rates have been taken.

It is important to observe that a departure has been made in the method of fixing the base index-numbers adopted in previous Reports. Hitherto each State and industry has been dealt with separately, the average wage in the particular State or industry in the year 1911 being taken as base (= 1000) for each such State or industry separately. The index-numbers thus obtained were not, of course, comparable throughout—that is to say, as between different States or industries—for the reason that the average wage in 1911 in each State or industry was made equal to 1000, though it is obvious that the wage was not, in fact, the same in each State or industry. As these limitations do not seem to have been clearly recognised by certain persons, it has been decided to furnish the results in future in such form that they are comparable throughout. In the tables of index-numbers given in this Section, the weighted average wage in 1911 for all States or industries, as the case may be, is accordingly taken as base (= 1000). The result is that the index-numbers are comparable in all respects, that is to say, they shew not only the variations in wages from year to year in each State or industrial group, but they also furnish comparisons as to the relative wages in each State or industry, either in any particular year, or as between one year and another, and one State or industry and another.

Particulars are given in this Section regarding changes in both nominal and effective wages. The nominal wage index-numbers are based merely upon the actual weekly rates, but in the effective wage index-numbers, variations in cost of living from year to year, as well as the relative difference in cost of living, are taken into account. At the end of the section information is also given as to effective wages allowing for variations, not only in cost of living, but also in unemployment, while particulars are also included as to "relative productivity."

2. Variations in Nominal Wage Index-Numbers in States, 1891 to 1913.—The following table shews, by means of index-numbers, the variations in wages for all industries in each State, the weighted average wage for the Commonwealth in 1911 being taken as base (= 1000). These results are based generally upon rates of wages prevailing in the capital towns of each State, but in certain industries, such as mining, agriculture, etc., rates are necessarily taken for places outside the metropolitan areas:—

Variations in Nominal Wage Index-Numbers in different States, 1891 to 1913.
(Weighted Average Wage for Commonwealth in 1911 = 1,000.)

Particulars.	No. of Occupations included.		1891	1900.	1901.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
	1891 to 1912.	1913.											
New South Wales	158	874	861	821	858	886	910	913	942	968	1,003	1,058	1,088
Victoria	150	909	789	757	796	807	857	871	887	924	985	1,038	1,058
Queensland	87	627	908	872	901	909	914	925	946	960	997	1,010	1,027
South Australia	134	567	811	813	819	832	858	868	905	951	1,013	1,048	1,061
Western Australia	69	489	1,022	1,046	1,052	1,053	1,053	1,061	1,068	1,116	1,152	1,191	1,214
Tasmania	54	482	751	682	719	749	725	732	772	772	799	934	1,025
Commonwealth*	652	3,948	848	816	848	866	893	900	923	955	1,000	1,051	1,076

*Weighted Average; see graph on page 56.

The significance of the above figures since 1906 can be better appreciated by reference to the graph on page 56, which shows, of course, not only variations in wages in each State from year to year, but also the difference in wage level as between the several States. From this graph it is clearly seen that, excluding Western Australia, the difference between nominal wages in the several States has decreased very considerably since 1906. This difference is shewn at any point by the vertical distance between the graphs. Wages in Queensland have obviously increased at a slower rate than in any other State, and their general level is now only a very little higher than in Tasmania. The graphs for Victoria and South Australia lie very close together throughout the period. In Tasmania the first determination under the Wages Boards Acts, 1910 and 1911, came into force in 1911. Since that year wages in Tasmania have increased very rapidly, and their general level is now not far below those of the other States, except Western Australia.

Between 1906 and 1913, the increase in wages was greatest in Tasmania (36.8 per cent.), followed in the order named by Victoria (31.1 per cent.), South Australia (27.5 per cent.), New South Wales (22.8 per cent.), Western Australia (15.3 per cent.), and Queensland (13 per cent.).

Comparing 1913 with 1901, the increase was greatest in Tasmania (42.5 per cent.), followed in the order named by Victoria (32.9 per cent.), South Australia (29.5 per cent.), New South Wales (26.8 per cent.), Western Australia (15.4 per cent.), and Queensland (14 per cent.). As the index-numbers are comparable throughout, it may be seen from the last vertical column that nominal wages are highest in Western Australia, followed in the order named by New South Wales, South Australia and Victoria (nearly equal), Queensland and Tasmania (nearly equal).

Again, comparing 1913 with 1891, the wages index-number increased in New South Wales from 861 to 1088, or 26.4 per cent.; in Victoria from 789 to 1058, or 34.1 per cent.; in Queensland from 908 to 1027, or 13.1 per cent.; in South Australia from 811 to 1061, or 30.8 per cent.; in Western Australia from 1022 to 1214, or 18.8 per cent.; in Tasmania from 751 to 1025, or 36.4 per cent.; and in the Commonwealth from 848 to 1076, or 26.9 per cent.

3. Variations in Nominal Wage Index-Numbers in Industrial Groups, 1891 to 1913.—The following table shews variations in nominal wage index-numbers, the occupations having been classified in the fourteen industrial groups to which reference has been made in preceding sections of this Report. As already pointed out, these index-numbers are comparable throughout, and shew, not only the variations in wages in each industrial group, but also the relative wages as between the several groups:—

Variations in Nominal Wage Index-Numbers in different Industries in the Commonwealth, 1891 to 1913. (Weighted Average Wage for all Groups in 1911. = 1,000.)

Particulars.	No. of Occupations included.		1891	1896.	1901.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
	1891 to 1912.	1913.											
I. Wood, Furniture, etc.	27	270	1,023	939	1,019	1,024	1,049	1,051	1,055	1,097	1,125	1,144	1,142 [†]
II. Engineering, Metal Works, etc.	101	636	931	929	945	957	971	989	995	1,006	1,064	1,104	1,113
III. Food, Drink, etc.	34	576	745	741	871	887	902	905	914	928	991	1,038	1,074
IV. Clothing, Hats, Boots, etc.	13	124	710	711	708	841	856	867	935	976	981	990	1,019
V. Books, Printing, etc.	25	205	1,043	977	996	1,002	1,010	1,021	1,070	1,102	1,149	1,188	1,234
VI. Other Manufacturing	102	875	904	872	907	906	905	915	923	947	1,013	1,037	1,076
VII. Building	67	190	966	926	1,050	1,070	1,105	1,114	1,130	1,163	1,213	1,245	1,270
VIII. Mining, Quarries, etc.	71	161	1,134	1,051	1,067	1,093	1,317	1,136	1,120	1,168	1,194	1,216	1,270
IX. Rail and Tram Services	68	224	992	995	1,021	1,024	1,027	1,031	1,064	1,074	1,113	1,164	1,166
X. Other Land Transport	9	70	772	703	795	795	813	830	836	889	910	993	996
XI. Shipping, etc.	74	198	745	673	751	778	787	787	856	857	871	942	958
XII. Agricultural, Pastoral, etc.	8	72	680	654	627	671	730	736	787	798	839	944	965
XIII. Domestic, Hotels, etc.	17	114	641	595	598	606	608	626	727	743	887	894	918
XIV. Miscellaneous	36	233	773	754	750	771	812	820	843	889	929	1,015	1,045
All Groups*	652	3,948	848	816	848	866	893	900	923	955	1,000	1,051	1,076

* Weighted Average; see graph on page 56 hereof. † The decrease in this group is due to a reduction in the award rates in the Furniture trade, resulting from an appeal made by employers.

It may be seen that the index-numbers for all groups increased during the whole period under review except in 1896, when there was a decrease. The index-number for 1901 is the same as that for 1891. The increase from 1891 to 1913 was greatest in Group III. (Food, Drink, etc.), amounting to no less than 44.2 per cent., while Groups IV. (Clothing, Hats, Boots, etc.), XII. (Agriculture, etc.), and XIII. (Domestic, Hotels, etc.), all shew increases during the same period amounting to over 40 per cent. The increase in Group XIV. (Miscellaneous), amounted to 35.2 per cent., while increases of over 20 per cent. occurred in Groups VII. (Building), X. (Other Land Transport), and XI. (Shipping, etc.). The remaining groups shew increases ranging from 11.6 per cent., in the case of Group I. (Wood, Furniture, etc.), to 19.5 per cent. in Group II. (Engineering, Metal Works, etc.).

The increase in 1913, compared with the previous year 1912, for all groups amounts to 2.5 per cent. It may be seen that increases occur in all the groups in 1913 except Group I. (Wood, Furniture, etc.), in which there was a slight decrease owing to a reduction in the award rates in the Furniture trade, as the result of an appeal to the Industrial Court.

4. Average Nominal Weekly Wages in the Several States, 1891 to 1913.

The following table shews the average weekly rate of wage payable to journeymen or adult male workers in each State from 1891 to 1913. The wages given in this table are *relatively* identical with the index-numbers shewn in the table on page 51.

**Average Nominal Rates of Wages Payable to Journeymen or Adult Male Workers
in each State from 1891 to 1913.**

Particulars.	1891.	1896.	1901.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
New South Wales..	44 1	42 1	43 11	45 4	46 7	46 9	48 3	49 7	51 5	54 3	55 9
Victoria ..	40 5	38 9	40 9	41 4	43 11	44 7	45 5	47 4	50 6	53 2	54 3
Queensland	46 6	44 8	46 2	46 7	46 10	47 4	48 5	49 2	51 1	51 9	52 8
South Australia ..	41 7	41 8	42 0	42 7	43 11	44 6	46 4	48 9	51 11	53 9	54 4
Western Australia	52 4	53 7	53 11	53 11	53 11	54 4	54 0	57 2	59 0	61 0	62 2
Tasmania ..	38 6	35 6	36 10	38 5	37 1	37 1	37 5	39 6	41 0	47 10	52 6
Commonwealth	43 5	41 10	43 5	44 4	45 9	46 1	47 3	48 11	51 3	53 10	55 1

The average weekly rate in 1913 was highest in Western Australia, followed in the order named by New South Wales, South Australia, Victoria, Queensland, and Tasmania. In each of the years specified the weekly rates were highest in Western Australia, and lowest in Tasmania. In each of the States of New South Wales, Victoria, and Queensland, the rates shew an increase in each of the years specified except in 1896, when there was a decrease compared with 1891. In South Australia there was an increase in each of the years specified, while in Western Australia the average rates remained constant in 1901, 1906, and 1907, with increases in each other year. In Tasmania there was a decrease in 1896 and again in 1907, and substantial increases in 1912 and 1913.

5. **Average Nominal Weekly Wages Payable in Industrial Groups, 1891 to 1913.**—The following table shews for each of the years indicated the average weekly wages payable in each of the fourteen industrial groups. These wages are *relatively* identical with the index-numbers shewn in the table on page 53.

**Average Nominal Rate of Wage Payable to Journeymen or Male Adult Workers
in each Industrial Group from 1891 to 1913.**

Particulars.	1891.	1896.	1901.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Group I.	52 5	48 2	52 3	52 5	53 9	53 10	54 1	56 2	57 8	58 7	58 6
.. II.	47 8	47 7	48 5	49 1	49 9	50 8	51 0	51 7	54 6	56 7	57 0
.. III.	38 2	37 11	44 7	45 6	46 3	46 5	46 10	47 6	50 9	53 2	55 0
.. IV.	36 8	36 5	36 3	43 1	43 10	44 5	47 11	50 0	50 3	50 9	52 3
.. V.	53 5	50 1	51 0	51 4	51 9	52 3	54 10	56 6	58 11	60 11	63 3
.. VI.	46 4	44 8	46 5	46 5	46 4	46 10	47 3	48 6	51 11	53 1	55 1
.. VII.	50 6	47 6	53 10	54 10	56 7	57 1	57 11	59 7	62 1	63 10	65 1
.. VIII.	58 1	53 10	54 8	56 0	57 3	57 2	57 5	59 10	61 2	62 4	65 1
.. IX.	50 10	51 0	52 4	52 5	52 7	52 10	54 6	55 0	57 0	59 7	59 8
.. X.	30 6	36 0	40 9	40 9	41 8	42 10	42 10	45 7	46 7	50 10	51 1
.. XI.	38 2	34 6	38 5	39 11	40 4	40 4	43 10	43 11	44 7	48 3	48 10
.. XII.	84 10	33 6	32 1	34 5	37 5	37 8	40 4	40 11	43 0	48 4	49 5
.. XIII.	32 10	30 6	30 8	31 0	31 2	32 1	37 3	38 1	45 5	45 10	47 0
.. XIV.	39 7	38 7	38 10	39 6	41 7	42 0	43 2	45 6	47 7	52 0	53 7
ALL GROUPS ..	43 5	41 10	43 5	44 4	45 9	46 1	47 3	48 11	51 3	53 10	55 1

It may be seen that in 1913 the weekly rate of wage was highest in the Mining and Building Groups (65s. 1d.), while the lowest average weekly rate was in Group XIII. (Domestic, Hotels, etc.), where the rate was 47s. The average weekly rate for all groups together increased in all the years since 1891 except 1896. The rate in 1901 was the same as in 1891 (43s. 5d.), but in 1913 had increased to 55s. 1d.

6. Variations in Effective Wages in each State, 1901 to 1913.—

In order to obtain an accurate measure of the progress of wage-earners, regard must be had to the purchasing power of wages, and the index-numbers based merely upon records of rates of wages must consequently be subject to some correction, inasmuch as they take no account of variations in cost of living. The following table shews the effective wage index-numbers for each State for each of the years indicated from 1901 to 1913.

In computing these effective wage index-numbers the nominal wage index-numbers given in paragraph 2 hereof have been divided by the cost-of-living index-numbers in Section IV., paragraph 5. The resulting index-numbers shew for each State and for the Commonwealth for the years specified the variations in *effective* wages.

Variations in Effective Wages in each State and Commonwealth, 1891 to 1913.

Particulars.	1901.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
New South Wales	961	949	983	926	952	973	973	922	924
Victoria ..	915	919	979	941	980	981	1,037	981	1,007
Queensland ..	1,172	1,165	1,151	1,081	1,112	1,095	1,090	1,032	1,060
South Australia	948	934	960	911	914	943	957	906	947
Western Aust.	1,024	1,029	1,068	1,060	1,081	1,091	1,023	1,032	1,076
Tasmania ..	827	833	818	788	769	812	838	896	976
Commonwealth	964	960	996	946	974	985	1,000	955	975

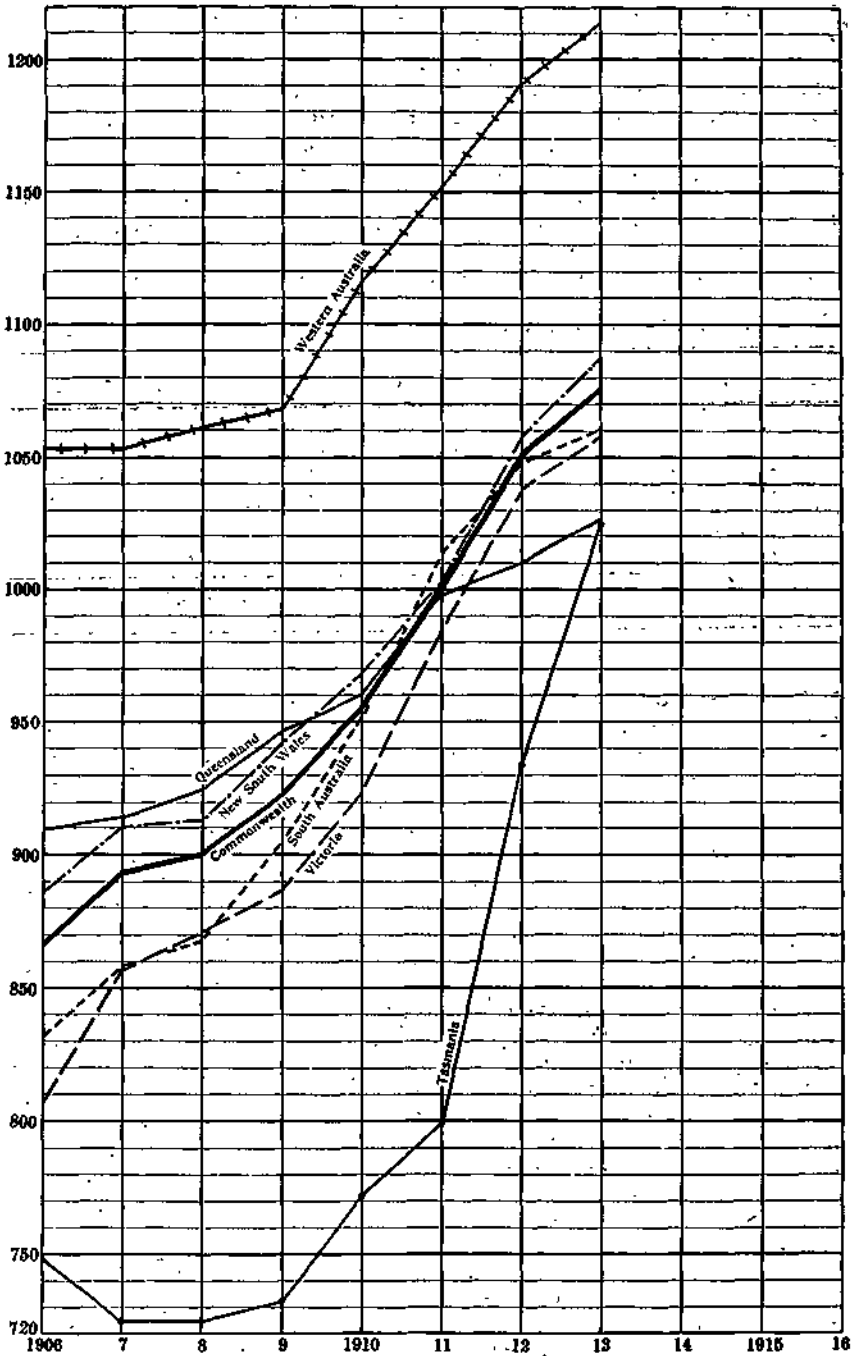
The figures in the above table from the year 1906 onwards are shewn in the graph on page 57. A comparison between this graph with that on the opposite page shews that the difference between nominal and effective wages is very marked. In the first place, the whole nature of the graphs is entirely different. Instead of having a series of lines shewing a practically continuous and rapid upward trend, the effective wages shew (except for Tasmania) a series of fluctuating points, in which no very marked tendency is immediately discernible. One of the most noticeable features in connection with the effective wage index-numbers is the fall which occurred, especially in New South Wales, Victoria, Queensland, and South Australia in 1908, a year of severe drought, in which there was a marked increase in cost of living, and again in 1912, when cost of living increased about 10 per cent.

One important feature common to both graphs (nominal and effective wages) is the manner in which the graphs for the individual States have approached more closely together. With the adoption of differential rates of wages fixed according to the relative cost of living, it appears probable that this tendency will continue in the future.

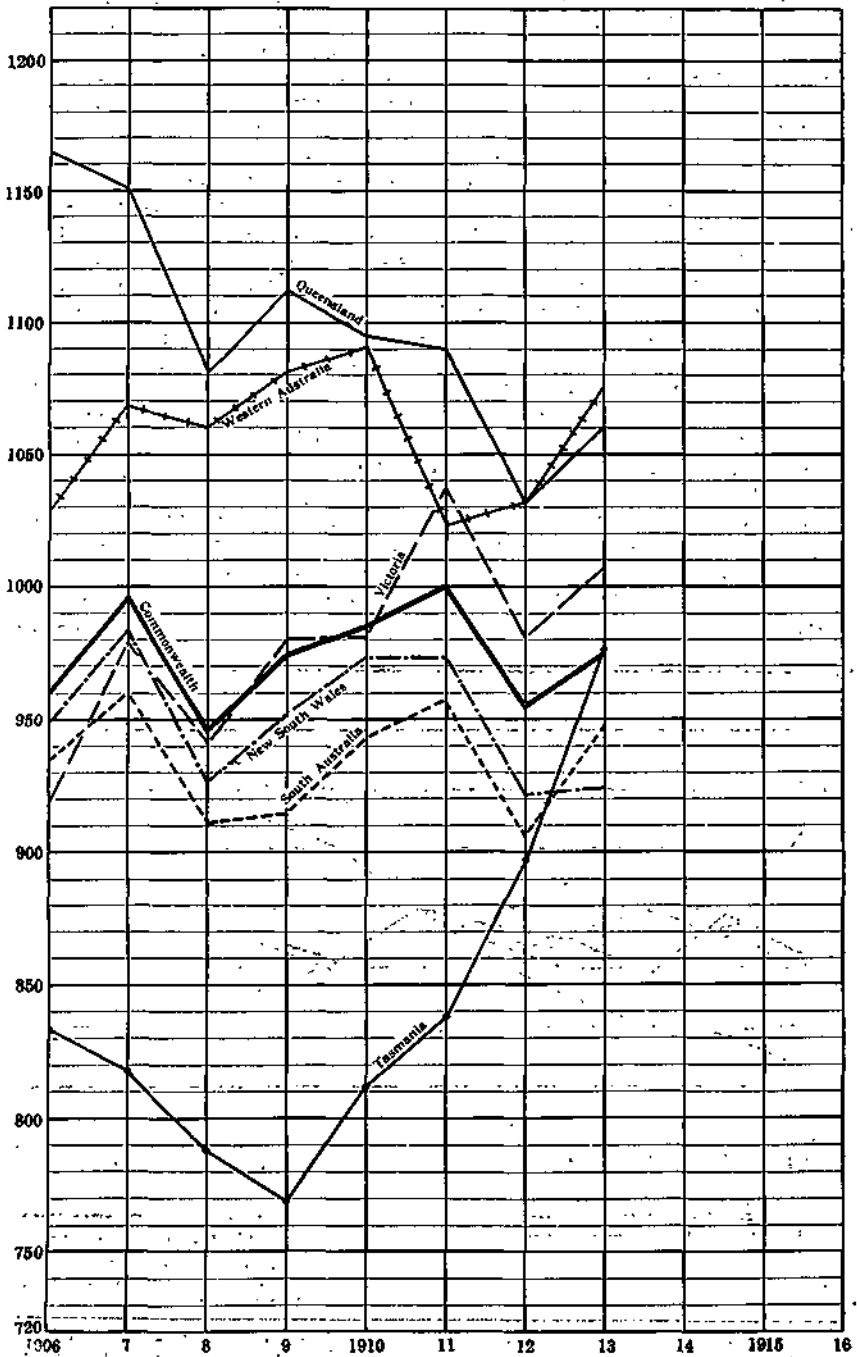
The relative positions of the States shewn in the two graphs is also of interest. Queensland, from being lowest but one in regard to nominal wages, is nearly as high as Western Australia in regard to effective wages. New South Wales, which comes second in nominal wages, is last in effective wages. South Australia changes from the third to the fifth place, Victoria from fourth to third, and Tasmania from last to fourth. Western Australia is first in regard to both nominal and effective wages, but its level above the other States is much less with respect to effective than nominal wages.

VARIATIONS IN NOMINAL AND EFFECTIVE WAGES.

NOMINAL WAGES INDEX-NUMBERS IN EACH STATE AND COMMONWEALTH, 1906 to 1913.

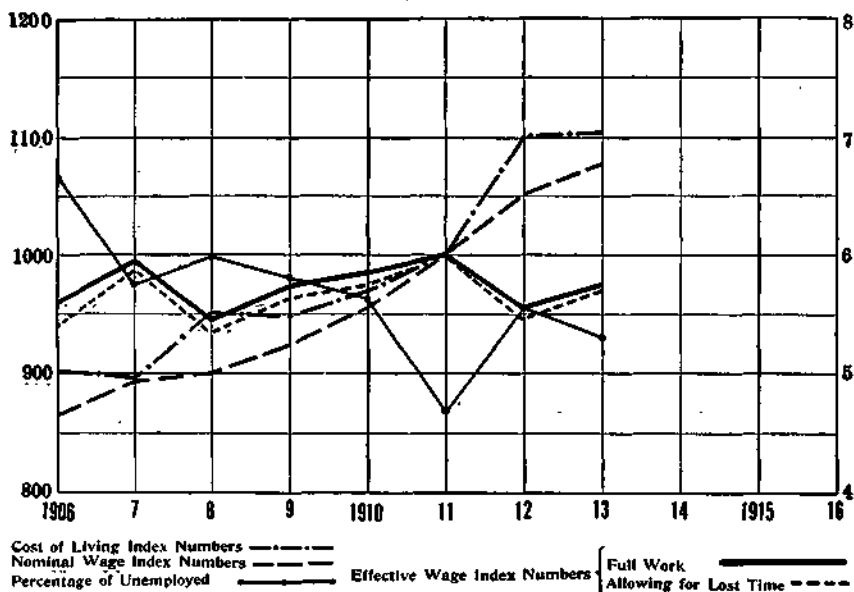


EFFECTIVE WAGE INDEX-NUMBERS IN EACH STATE AND COMMONWEALTH, 1906 to 1913.



7. **Variations in Effective Wages and Standard of Comfort, 1891 to 1913.**—In the preceding paragraph particulars are given as to variations in effective wages in each State, due allowance having been made for variations in cost of living, though not for unemployment. For years prior to 1913 the data available as to unemployment in the different States are so meagre that comparative results allowing for variations both in cost of living and in unemployment cannot be accurately computed for the several States. In the table, on page 59, however, the percentage of unemployment for the whole Commonwealth at the end of the years specified has been used in order to obtain results shewing the variations in unemployment upon effective wages. Column I. shews the nominal rate of wage index-numbers (see paragraph 2 hereof), and Column II. the relative percentages unemployed (see Section III.). Applying these percentages to the numbers shewn in Column I., and deducting the results from each corresponding index-number, so as to allow for relative loss of time, the figures in Column III. are obtained. These figures are then re-computed with the year 1911 as base, and are shewn in Column IV. In Column V. the cost of living index-numbers are shewn, and in Columns VI. and VII. the effective wage index-numbers are given, firstly, for full work, and, secondly, allowing for lost time. These are obtained by dividing the figures in Columns I. and IV., respectively, by the corresponding figures in Column V. The resulting index-numbers shew for the Commonwealth for the years specified the variations in *effective wages* or in what may be called the "standard of comfort."*

UNEMPLOYMENT, COST OF LIVING AND NOMINAL AND EFFECTIVE WAGE INDEX-NUMBERS, 1906 TO 1913.



EXPLANATORY NOTE.—Each space in the horizontal scale represents one year. The vertical spaces on the left represent the scale for the index-numbers for cost of living and wages, while the scale on the right from 4 to 8, represents the percentage of unemployment.

* This expression must not be confused with "standard of living." A change in the standard of living necessarily involves a change in regimen (see Report No. 1), that is, a change in the nature or, in the relative quantity of commodities purchased, or both. A change in the "standard of comfort" merely implies a variation in effective wages, which variation may, or may not, result in, or be accompanied by, a change in the "standard of living."

A comparison between the figures in Columns I. and VI. shews the relation between the nominal rates of wages and the purchasing efficiency of these rates. The figures in Column VII. (see graph on page 58) shew variations in *effective* wages after allowing not only for increased cost of living, but also for the relative extent of unemployment.

Unemployment, Cost of Living and Nominal and Effective Wage Index-Numbers, 1891 to 1913.

Year.	I. Nominal Wages Index- Numbers.	II. Percentage Unem- ployed.	Rate of Wages Index- Numbers, allowing for Lost Time.		V. Cost-of- Living Numbers.	Effective Wage Index-Numbers.	
			III. Actual.	IV. Recom- puted. (1911 =1,000).		VI. Full Work	VII. Allowing for Lost Time.
1891	848	9.3	770	808	973*	872	830
1896	816	10.8	728	764	823*	991	928
1901	843	6.6	793	832	880	964	945
1906	866	6.7	808	848	902	960	940
1907	893	5.7	842	884	897	996	986
1908	900	6.0	846	888	951	946	934
1909	923	5.8	870	913	948	974	963
1910	955	5.6	901	945	970	985	974
1911	1,000	4.7	953	1,000	1,000	1,000	1,000
1912	1,051	5.5	968	1,042	1,101	955	946
1913	1,076	5.3	1,021	1,071	1,104	976	970

* Based on Sydney figures only; exclusive of House Rent.

The above figures are shewn in the graph on page 58. It may be seen that the nominal wage index-number has steadily increased (except in 1896), and that the increase has generally been at a somewhat greater rate (except in the year 1912) than the increase in the cost of living. The effective wage index-numbers (both "Full Work" and "Allowing for Lost Time") do not, on the other hand, shew any general increase in more recent years, but fluctuate between a range which reached its minimum in 1908, and its maximum in 1911. The figures prior to the year 1906 are available only at quinquennial periods, and it may be observed that the *effective* wages in 1891 were relatively very low owing to the large percentage of unemployment and the high cost of living. In 1896, though the percentage unemployed increased, the cost of living decreased to a greater extent, with the result that effective wages in that year were higher than in 1891. By 1901 the percentage unemployed had decreased considerably, with a consequent increase in effective wages. In 1907 there was again a large decrease in unemployment, causing the "peak" in the effective wage index-number for that year. The rise in the cost of living in 1908, which was a drought year, caused a considerable fall in effective wages. From that year, however, until the year 1911, the effective wage index-number steadily increased from 934 to 1000, but this increase was more than counterbalanced by the fall in 1912, which was due to the large increase in cost of living and the smaller increase in unemployment. It may be seen that in 1913 the cost-of-living index-number was practically the same as for 1912, while nominal wages increased and unemployment decreased. Consequently the effective wages index-numbers, both for full work and allowing for lost time, shew an increase.

8. **Relative Productive Activity and Effective Wages, 1871 to 1913.**—The preceding tables refer to the matter of variations in effective wages having regard to fluctuations in cost of living and extent of unemployment. Another important matter in any investigation into increases in rates of wages is the question of increase in relative output or production per head of population.

Figures are published annually shewing the estimated *value* of production from industries in the Commonwealth, but these figures do not reveal whether there has been any increase in the *quantity* of productive activity, since the price-level from year to year is itself a factor in the determination of the values. Before, therefore, any estimate of the increase or decrease in the relative productive activity, that is, in the relative quantity of output or production per head of population, can be formed, the price element must be eliminated. This is done in the following table in which Column I. shews the estimated *value* of production (a) total and (b) per head of mean population. In Column II. the estimated value of production per head of population is shewn in the form of index-numbers with the year 1911 as base, that is to say, the production per head in 1911 is made equal to 1000, and the values for the other years computed accordingly. In Column III. Melbourne wholesale price index-numbers are given; it is assumed that these index-numbers reflect, with substantial accuracy, variations in wholesale prices in the Commonwealth as a whole. The figures in Column IV. are obtained by dividing the figures for each year in Column II. by the corresponding figures in Column III. They shew the estimated relative productive activity per head of population, taking the year 1911 as the basic or standard year, the fluctuations due to variations in prices having been eliminated.

Estimated Relative Productive Activity in Commonwealth, 1891 to 1913.

Year.	I. Estimated Value of Production.		II. Estimated value of Production per Head	III. Wholesale Price- Index- Number	IV. Estimated Relative Productive Activity Index- Number
	(a) Total.	(b) Per Head of Popula- tion.	(1911 = 1,000).	(1911 = 1,000).	(1911 = 1,000).
	£000	£			
1871 ..	46,700	27.89	661	1,233	536
1881 ..	71,116	31.34	746	1,124	664
1891 ..	96,087	30.06	715	945	757
1901 ..	114,585	30.23	719	974	738
1906 ..	147,043	36.21	862	948	909
1907 ..	167,446	40.61	966	1,021	946
1908 ..	164,957	39.33	936	1,115	839
1909 ..	174,503	40.82	971	993	978
1910 ..	187,734	43.92	1,045	1,003	1,042
1911 ..	188,745	42.03	1,000	1,000	1,000
1912 ..	206,732	44.51	1,059	1,170	905
1913 ..	218,200*	45.41	1,080	1,088	993

* Subject to slight revision.

These figures shew that the estimated relative productivity per head of population increased by no less than 86 per cent. from 1871 to 1911, and by nearly 33 per cent. from 1891 to 1911. The increase was not uniform during the whole of the years specified, slight decreases occurring in 1901 and 1911, and a heavy fall in 1908, which was a year of severe drought. It may also be seen that the increase in productive activity per head has relatively been far greater than the increase in nominal wages and still greater than the increase in effective wages.

SECTION IX.—OPERATIONS UNDER ARBITRATION AND WAGES BOARD ACTS.

1: **General.**—Particulars have been compiled regarding operations under the various Commonwealth and State Acts for the regulation of wages and hours and conditions of labour shewing the number of boards authorised and constituted, and the number of awards, determinations, and industrial agreements in force on the 30th September, 1914. Information as to the main provisions of the various Acts in force was given in "Labour Bulletin" No. 1, pages 57 to 60.

The number of industrial boards in existence in New South Wales on the 30th September, 1914, was 213, while the total number of awards of Boards and of the Court in force on that date was 262. In Victoria there were on the same date 135 Wages Boards in existence, affecting about 150,000 employees. Of these, 129 Boards had made 133 determinations which were in force. All the Boards authorised, with the exception of three, had met for the purpose of fixing wages, hours, etc. The Court of Appeal in Victoria had heard fifteen appeals from determinations of Wages Boards. In one case the decision was upheld; in twelve cases decisions were reversed or amended; in one case the Board, unable to come to a determination, referred the matter to the Court, which exercised its power of fixing a proper wage where the average wage paid by employers did not afford a living wage. Of these decisions six were in force on the 30th September, 1914, the others having been superseded by amended determinations. The Court also heard an appeal for a modification of its determination with respect to a trade, and decided to amend such determination by reducing the working hours and increasing the wages in certain cases. The number of Wages Boards authorised in Queensland up to the 30th September, 1914, was 99, the employees affected numbering about 90,000. In 89 cases determinations were in force, but fifteen had been varied on Appeal to the Industrial Court. Under the Industrial Peace Act 1912, all Boards established continued in existence, and their determinations were recognised. In South Australia there were, at the end of September, 1914, 57 trades under Boards, covering about 25,000 employees. Fifty-five determinations were in force, including six made by the Industrial Court, in lieu of Wages Boards, on the Minister for Industry reporting the inability to appoint Boards as authorised, or the failure of the constituted Boards to discharge the duties required under their appointment. In Western Australia awards have been made under "The Industrial Arbitration Act 1912" for 38 Industrial Unions, but only sixteen re-