From the loregoing table it may be seen that with the exception of Western Australia, there has been a steady diminution in the number of working hours, constituting a full week's work in male occupations. On the other hand, excepting in Victoria and Tasmania, the hours of work in female occupations have shewn a slight increase. The effect of these changes on the hourly rate of wage as compared to the general increase in the weekly wage is readily seen from the comparative indexnumbers given in the following table. In each instance (male and female occupations separately) the basis taken is the weighted average for the Commonwealth at the 30th April, 1914, as base ( $=1000$ ).

Relative Index-nambers for Weekly and Hourly Weighted Average Wage, 30th April, 1914, 31st December, 1914, and 31st December, 1915.
Note. -Weighted Average' for the Commonwealth at 30th April, 1914, as base $(=1000)$.


It'may be seen that the effect of the shorter working hours for male workers in each week as between the 30th April, 1914, and the 31st December, 1915, equals an increase of 0.8 per cent. on the relative hourly rate in New. South Wales and Victoria, 1.4 per cent. in Queensland, 0.1 per cent. in South Australia, and 0.7 per cent. for the whole Commonwealth. In Tasmania conditions remained normal, whereas in Western Australia the increase in working hours made a difference of 0.9 per cent. depreciation in the relative hourly wage.

## SECTION VIII.-VARLATIONS 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. The results of these records have been published in the quarterly Labour Bulletins and in Labour Report No: 5. 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 nominal wages from year to year in each State and in various industrial groups. Index-numbers are also given. shewing variations in effective wages in each State.

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.

## 2. Variations in Nominal Wage Index-Numbers in States, 1901

 to 1915. -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:-| Particulars. |  |  | 1901 | $1908 .$ | 1907. | 1908. | $1900 .$ | 1910. | 1911. |  | $\begin{array}{\|l\|} \hline \\ \hline 1913 . \\ \hline \end{array}$ | 1914. | 1915. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} 1901 \\ \text { to } \\ 1912 . \end{gathered}$ | 1913* |  |  |  |  |  |  |  |  |  |  |  |
| New South Wales | 158 | 874 | 858 | 888 | 930 | 013 | 942 | 988 | 1,003 | 1,058 | 1,088 | 1,096 | 1,124 |
| Victoria ${ }^{\text {- }}$ | 150 | 909 | 798 | 807 | 857. | 871 | 887 | 024 | 085 | 1,088 | 1,058 | 1,065 | 1,076 |
| Queensland - | 87 | 627 | 001 | 909 | 914 | 925 | 946 | 960 | ${ }^{9} 97$ | 1,010 | 1,027 | 1,042 | 1, 060 |
| South Australia. ${ }^{\text {a }}$ | 134 | 567 | 819 | 832 | -858 | 868 | ${ }^{9} 95$ | - 951 | 1,013 | 1,048 | 1,061 | 1,062 | 1,067 |
| Western Australia | 69 | 489 | 1,052 | 1,058 | 1,053 | 1,061 | 1,068 | 1,116 | 1,154 | 1,191 | 3,214 | 1,226 | 1,236 |
| Tasmania.. .. | 54 | 482 | 719 | 749 | 725 | 725 | 732 | 772 | 799 | 934 | 1,025 | 1,028 | 1,039 |
| Commonwealth* | 652 | 3,948 | 848 | 868 | 893 | 900 | 923 | 955 | 1,000 | 1,051 | 1,076 | 1,086 | 1,102 |

* Weighted average ; see graph on page 69.

The significance of the above figures since 1906 can be better appreciated by reference to the graph on page 69, which shews, 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 increased during 1914 at a higher rate than in any nther State, and though the general level in that State is now only a little higher than in, Tasmania", it is gradually approaching South Australia, where the rate of increase in 1914 was slower than in any other State. 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. In 1912 and 1913 wages in that, State increased very rapidly, and their general level is now not far below those of the other States, except Western Australia.

Between 1906 and 1915 the increase in wages was greatest in Tasmania ( 38.7 per cent.), followed in the onder named by Victoria ( 33.6 per cent.), South Australia (28.2 per cent.), New South Wales (26.9 per cent.), Western Australia (17.4 per cent.), and Queensland (16.6 per cent.)

Comparing 1915 with 1901, the increase was greatest in Tasmania ( 44.5 per cent.), followed in the order named by Victoria ( 35.4 per cent.), New South Wales ( 31.0 per cent.), South Australia ( 30.3 per cent.), Queensland ( 17.6 per cent.), and Western Australia ( 17.5 per cent.). As the index-numbers are comparable throughout, it may $b *$ seen from the last vertical column that nominal wages are highest in Western Australia, followed in the order named by New South Wales, Victoria, South Australia, Queensland, and Tasmania.

## 3. Variations in Nominal Wage Index-Numbers in Industrial

 Groups, 1901 to 1915. -The following table shews variations in nominal wage index-numbers, the occupations having been classified in fourteen industrial groups. 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, 1901 to 1915. (Weighted Average Wage for all Groups in 1911 $=1,000$ ).

| Particnlarg. | No. of <br> occupa- <br> tions <br> included. |  | 1901. | 1906. | $1907 .$ | 1908. | 1909. | 1910. | 1911. | 1912. | 1913. | 1914. | 1916. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} 1901 \\ \text { to } \\ 1912 . \end{gathered}$ | $\begin{gathered} 1933 \\ 15 \end{gathered}$ |  |  |  |  |  |  |  |  |  |  |  |
| I. Wood, Furnture, etc. | 27 | 270 | 1,019 | 1,024 | 1,049 | 1,051 | 1,055 | 1,007 | 1,125 | 1,144 | 142 | 161 | 1,174 |
| II. Engneering, Metal |  |  |  |  |  |  |  |  | 1,125 |  |  | 1,361 | 1,174 |
| III. Works, etc. .. | 101 | 636 | 945 | 957 | 971 | 089 | 905 | 1,006 | 1,064 | 1,104 | 1,113 | 1,127 | 1,174 |
| III. Food, Drink, etc. . | 34 | 576 | 871 | 887 | 002 | 005 | 914 | 928 |  | 1,038 | 1,074 | 1,085 | 1,127 |
| IV. Clothing, Hata, Boots, etc. | 13 | 124 | 708 | 841 | 856 | 867 | 035 | 076 |  | 900 |  |  | 1,037 |
| v. Books, Printiag, ete. | 25 | 205 | 996 | 1,002 | 1,010 | 1,021 | 1,070 | 1,102 | 1,149 | 1,188 | 1,284 | 1, 546 | 1,269 |
| VI. Other Manufacturing | 102 | 875 | 007 | , 906 | -905 | . 915 | 023 | 947 | 1,013 | 1,037 | 1,076 | 1,093 | 1,125 |
| VII, Building $\quad+{ }^{+}$ | 67 | 190 | 1,050 | 1,070 | 1,105 | 1,114 | 1,130 | 1,163 | 1,213 | 1,245 | 1,270 | 1,276 | 1,285 |
| VIII. Mining, (atarries, etc. | 71 | 161 | 1,067 | 1,093 | 1,117 | 1,116 | 1,120 | 1,168 | 1,194 | 1,216 | 1,270 | 3,272 | 1,299 |
| IX. Roil d'tram services | 68 | 224 | 1,021 | 1,021 | 1,027 | 1,031 | 1,064 | 1,074 | 1,113 | 1,164 | 1,165 | 1,105 | 1,187 |
| $\underset{\text { X }}{ }$. OtherLandTransport | 9 | 70 | 795 | 795 | ${ }^{-1} 813$ | , 836 | 1,836 | '889 | '910 | 903 | -906 | 1,020. | 1,041 |
|  | 74 | 108 | 751 | 778 | 787 | 787 | 856 | 857 | 871 | 9.42 | 958 | . 972 | 1,026 |
| XII. Agricultural, Pastoral, | 8 | 72 | 027 | 671 | 730 | 736 | 787. | 798 | 839 | 944 | 905 | 965 | 069 |
| XIII. Domestic, Hotels, etc. | 17 | 114 | 508 | 606 | 608. | 626 | 727 | 743 | 887 | 894 | 918 | 935 | 8 |
| XIV. Ifecellaneons | 36 | 233 | 759 | 773 | 812 | 820 | 843 | 889 | 929 | 1,015 | 1,045 | 1,054 | 1,065 |
| All Groups.* . + + | 652 | 3,948 | 848 | 866 | 893 | 900 | 923 | 955 | 1,000 | 1, 051 | 1,076 | 1.085 | 1,102 |

* Weighted average; see graph on page 69 hereof. $\dagger$ The slight decrease in this group wae due to a reduction in the award rates in the Furnlture Trade in New South Wales, resulting irom an appeal made by employerg.

It may be seen that the index-numbers for all groups increased during the whole period under review. The increase from 1901 to 1915 was greatest in Groups XIII. (Domestic, Hotels, etc.), and XII. (Agricultural, Pastoral, etc.), amounting to no less than 58.5 and 54.5 per cent., respectively, while Group IV. (Clothing, Hats, Boots, etc.), shews
an increase during the same period amounting to 46.5 per cent. The increase in Group XIV. (Miscellaneous) amounted to 40.3 per cent., in Group XI. (Shipping, etc.) to 36.6 per cent., and in Group X. (Other Land Transport) to 30.9 per cent., while increases of over 20 per cent. occurred in Groups II. (Engineering, Métal Works, etc.), III. (Food, Drink, etc.), V. (Books, Printing, etc.), VI. (Other Manufac turing), VII. (Building), and VIII. (Mining, Quarries, etc.). The remaining groups shew increases of 15.2 per cent., in the case of Group I. (Wood, Furniture, etc.), and 16.3 per cent. in Group IX. (Rail and Tram Service).

The increase in 1915 compared with the previous year 1914, for all groups amounts to 1.6 per cent. It may be seen that increases occur in all the groups in 1915 .
4. Average Nominal Weekly Wages in the Several States, 1891 to 1915. - The following table shews the average weekly rate of wages payable to adult male workers in each State from 1891 to 1915 . The wages given in this table are relatively identical with the index-numbers shewn in the table on page 65 .

## Average Nominal Rates of Wages Payable to Adult Male Workers in each State from 1891 to 1915.

| Particulars. | 1891. | 1896. | 1901. | 1906. | 1907. | 1908. | 1909. | 1910. | 1911. | 1912. 1013. | 1914. | 1915 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| N |  | 5. 4. | s. d. | s. ${ }^{\text {a }}$ d | 16 | 18 | s. ${ }^{\text {d }}$ | s. ${ }^{\text {d }}$. | s. ${ }^{\text {d }}$. | ${ }_{5}^{6}+$ | 5. |  |
| Vietor | 44 |  |  |  |  | 4 |  |  |  |  |  |  |
| Queensland | 4 |  |  |  | 43 | 47 | 45 | 4 |  |  |  |  |
| South Australia | 41 | 41 | 42 |  | 4311 | 44 | 6 | 8 9 | 51 | 3354 | 54 | 4 |
| Wegtern Australia | 52 | 537 | 5811 | 5311 | 5311 | 54 | $54 \quad 9$ | 57 | 59 | 61062 | 6210 | B ${ }^{\text {d }}$ |
| Tasmania | 38 | 35 6 | 3610 | 885 | 371 | 37 | 375 | 39 ¢ | 410 | 471052 | 528 | 53 |
| Commonwealth | 43 | 4110 | 43 | 44 4 | 45 | 461 |  | 4811 |  | 5310,65 | $155$ | 56 |

The average weekly rate in 1915 was highest in Western Australia, followed in the order named by New South Wales, Victoria, South Australia, 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 1915. -The following table shews for each of the years indicated the average weekly wages payable in each of the fourteen industrial groups. The wages are relatively identical with the index numbers shewn in the table on page 66.

Average Nominal Rate of Wage Payable to Male Adult Workers in each Industrial Group from 1891 to 1915.

| Fartículars. | 1891. | 1896. | 1901. | 1906. | 1907. | 1908. | . 1909. | . 1910. | 1011. | 1912. | 1913. | 1014: | 1915. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1i. |  |  | 748 |  | 49 | 9508 | 8151 | ${ }^{151} 5$ | 754 | 050 | 570 | 0 | 900 |
| ", Iİ. | 38 | 3711 |  | 45 | $4^{48}{ }^{\prime \prime}$ | 346 | 54010 | ${ }^{104} 18$ |  | ${ }^{5} 53$ | 55 | ${ }^{5} 55$ | 857 |
| $\because \mathrm{IV}$ V. | $\begin{array}{ll}36 & 8 \\ 53 & 5\end{array}$ |  |  | ${ }^{4} 43.1$ | 14310 | $0 / 44$ 9 5 5 | ${ }_{3}^{5} 47411$ | 150 050 | ${ }_{688}^{50}$ | ${ }^{3} 150{ }^{5} 18$ | ${ }^{52}$ 8. 3 | 363 0 |  |
| $\because \mathrm{V}$ | 46 4 | ${ }_{44}^{4} 8$ | ${ }^{51} 5$ | 5 | ${ }_{46}$ | 44610 | ${ }^{3} 47$ | 3.48 | 0151 | 153 | 55.1 | 156 | ${ }^{5} 578$ |
| VII |  | $1{ }^{47} \cdot 6$ | 85310 | 54 |  | ${ }_{3} 757.1$ | 15711 | $5{ }^{59} 59$ | 7621 | $1{ }_{2} 6210$ |  | 1185 | 50510 266 |
| $\because \quad$ VX | 50 | 15310 |  |  | 557 |  | 257 | 559 655 | 0.57 | ${ }_{0}^{2} 828$ | ${ }^{4} 585$ | 165 859. | $\begin{array}{lll}266 & 7 \\ 860 & 10\end{array}$ |
| " ${ }^{\text {P }}$ |  | $3{ }^{36} 0$ |  | 40 |  | 84210 | 0 | 10,45 7 | 746 | 75010 |  | 159 | 853 |
| $\because \quad \mathrm{XI}$ | $38{ }^{2}$ |  |  | 53911 | 40 | $5_{5}^{40} 4$ | $4{ }_{8} 4310$ | 1044811 | $1{ }^{44}$ | $7{ }^{7} 48$ | 34810 | ${ }^{49}$ | 552 |
| $\because$ X X $\because$ it | 34 10 | 306 | 630 8 |  | ${ }^{37}$ | ${ }_{2}^{57} 38$ | ${ }_{1}^{8} 137$ | ${ }_{3}^{4881} 1$ | 145 | ${ }_{5}^{0} 4810$ |  | 0471 |  |
| XIV. | 397 | ${ }^{38} 7$ | 73810 | 39 | 81 | 7420 | 043 | $2 \cdot 45$ |  | 7520 |  | 754 | 0,64 |
| All Groups | 435 | 4110 | 43 | 44 |  | 946 | 147 | $3^{1} 4811$ |  |  |  |  |  |

It may be seen that in 1915 the weekly rate of wage was highest in Group. VIII. ${ }^{\text {j: }}$ Mining (66s. 7d.), while the lowest average weekly rate was in Group XIII. (Domestic, Hotels, etc.), where the rate was 48 s . 7d. The average weekly rate for all groups togetber increased in all the years since 1891 except 1896 . The rate in 1901 was. the same as in 1891 ( 43 s .5 d .), but in 1915 had increased to 56 s .6 d .
6. Nominal Wages and Effective Wages.-Wages are said to be nominal when they refer to the actual amounts of money received in return for labour, and are described as effective when their equivalence in purchasing power is expressed, that is their purchasing power according to some definite "composite unit" or "regimen," the cost of which is ascertained at a particular date or during a particular period adopted as a datum for reference. From what has been said in Section IV., par. 3, it is obvious that "effectiveness" of wages can be unequivocally ascertained only when changes in price vary normally, that is to say, when it is practicable and reasonable to regard the "composite unit", as continuously applicable. Estimations of, the effectiveness of wages when the original regimen or composite unit ceases to be of reasonable application; as may be the case in times of severe drought, war, etc., becomes of more or less questionable validity. At such times some modification of the accustomed regimen may (or should) take place, and in the degree to which such modification may, occur effective wages will become involved in uncertainty. It should; consequently, be borne 'in mind that index-numbers of effective wages, computed on the supposition of the continual maintenance of a constant regimen cannot be taken to really represent unequivocally the actual effectiveness of wages, they represent rather what would have been the effectiveness of the wages, had the "composite unit" throughout been virtually the one in use with the wage-earning community. The limitations indicated in Section IV., par. 3, already referred to, apply also liere. Fundamental changes in the usage of commodities vitiate the method, as is obvious from the analysis of the technique for properly ascertaining price-indexes outlined in Report No. 1, Appendix VIII., Pp. 23 to 38. Just as there is no unequivocal means of comparing price-indexes, between say a rice-eating and a meat-eating community, or between a community living according to a very elementary standard of comfort, and one living'according to a much more advanced standard, so there is in its degree no unequivocal method of computing effectiveness of wages, when the circunstances of the time involve material changes in the " regimen," or are characterised by a temporary passing through abnormal conditions, profoundly affecting the conditions of living.

YOMINAL WAGE INDEX-NUMBERS IN EACE STATE AND COMMONWEALTE, 1906 to 1915.


EFFEGTIVE WAGE INDEX-NUMBERS IN EACH STATE AND COMAONWEALTH,

7. Variations in-Effective Wages in each State, 1901 to 1915, In comparing wages two elements are of obvious importance, viz., (i.) hours worked per day or week, etc., and (ii.) the purchasing-power of money (in regard to the composite unit adopted). Thus 60s. per week of 60 hours is equivalent to 48 s . per week of 48 hours on the time basis. Similarly, on the purchasing-power basis, if the purchasing-power fall one fourth, i.e., if the index-number of the purchasing-power rises from 1000 to 1250 ,* then 60s. per week (the index being 1250, is effectively equal only to 48 s . (when the index was 1000). Or, again, if the purchasing-power rise one fourth, as is implied by a fall in the index-number from 1000 to 750 , then 60 s . per week originally would, as regards the composite unit, be equal in purchasing power to 80 s . Ignoring altogether for the present the number of hours worked and subject to the limitations referred to in the preceding paragraph, and further assuming that the real 'valus of the average wages is to be measured by their purchasing power in regard to the "composite unit". adopted, then we can reduce the actual average wages paid to their effective value by applying the pur-chasing-power-of-money index-numbers to the nominal wages indexnumbers. The following table shews the effective wage index-numbers for each State for each of the years indicated from 1901 to 1915.

In computing these effective wage index-numbers the nominal wage index-numbers given in paragraph 2 hereof have been divided by the purchasing-power-of-money index-numbers in Section IV., paragraph 5 hereinbefore. 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, 1901 to 1915.*

| Particulars. | 1901. | 1906. | 1907. | 1908. | 1909. | 1910. | 1911. | 1912. | 1913. | 1914. ${ }^{\text {' }}$ | 1915. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| N.S.W. | 961 | 949 | 988 | 926 | 952 | 978 | 973 | 922 | 924 | 909 | 850 |
| Victorla | 915 | 919 | 979 | 941 | 980 | 981 | 1,037 | 981 | 1,007 | 964 | 844 |
| Queentiand $\quad \cdots$ | 1,172 | 1,165 | 1,151. | 1,081 | 1,112 | 1,095 | 1,090 | 1,082 | 1,060 | 1,045 | 912 |
| South Australla $\therefore$ | , 948 | 1934 | , 980 | . 911 | , 914 | 943 | 957 | . 906 | 947 | 929 | 847 |
| Western Austraila | 1,024 | 1,029 | 1, 068 | 1,080 | 1,083 | 1,091. | 1,023 | 1,082 | 1,076 | 1,073 | 1,011 |
| Tammania... . | 827 | 833 | 818 | 788 | 768 | 812 | 838 | +896 | 976 | 943 | 845 |
| Commonwealth | 964 | 960 | 996 | 946 | 974 | 985 | 1,000 | 955 | 975 | 952 | 862 |

* As to the effect in abuormal periods see Section IV hereof, par. 3.

The figures in the above table from the year 1906 onwards are shewn in the graph on page 70. A comparison between this graph with that on the opposite page shew's 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. It will be seen that, generally speaking, the years $1907,1909,1910,1911$, and 1913 were marked by increases in effective wages, but that in each of the years 1908, 1912, 1914, and 1915, there were rapid decreases. Each of these years in which effective wages declined were years of severe drought, when there was a rapid increase in cost of food and groceries (see graph on page 29). In 1914 wages increased 0.9 per cent., but purchasing-power-of-money index-number went up 3.1 per

[^0]cent.,' with the result that effective wages decreased 2.3.per cent. In 1915 the nominal wage index-number increased 1.6 per cent., while the purchasing-power-of-money index-number increased 12.1 per. cent., resulting in a decrease of 9.5 per cent. in the effective wage..

One important feature common to both graphs (nominal and effective wages) is the manner in which the graphs for the individual States have; on the whole, approached more closely together. With the adoption of differential rates of wages fixed according to the relative pur-chasing-power of money, 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 is lowest but one in regard to nominal wages, but is higher than any other State except Western Australia in regard to effective wages. New South Wales, which comes second in nominal wages, is third in effective wages. South Australia occupies the fourth place in each graph, Victoria changes from the third to the fifth place, and Tasmania is the lowest in each case. 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. .
8. Variations in Effective Wages and Standard of Comfort; 1901 to 1915.-In the preceding paragraph particulars are given as to variations in effective wages in each State, due allowance having been made for variations in the purchasing-power of money, though not for unemployment. Attention has also been drawn to the limitations to which they are subject in abnormal times.

If 48 hours per week be the time for which a given wage is paid, say 60s., then for the purpose of estimating the aggregate average earnings, account must be taken of the proportion of time spent in unemployment. For example, if the working days be 300 per year, and the time unemployed be 6 per cent., the actual proportion of working time is .94 per cent., i.e., 18 days are idle in every 300 , or 6 per cent. of the period. Similarly if of the employable an average of only 94 per cent. are employed, the measure of unemployment is again 6 per cent., and the -employment index-number is 940 ; i.e., 940 in 1000 , or 94 per cent.

For years prior to 1913 the data available as to unemployment are so meagre that comparative results allowing for variations both in the purchasing-power of money and in unemployment cannot be accurately computed for the several States. In the subjoined table, 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 II.). 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 recomputed with the year 1911 as base, and are shewn in Column IV. In Column V. the purchasing-power-of-money 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 Column I. and IV, respectively, by the corresponding figures in Column
V. -The resalting 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."*

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 74) shew variations in effective wages after allowing not only for variations in purchasing-power of money, but also for the relative extent of unemployment.
Unemployment and Nominal and Effective Wage Index-numbers, 1801 to $1915 . \dagger$

|  | Year. |  | Nominal Wages IndexNimbers. | PercentageUnentployed. | Rate of Wages IndexNumbers, allowing for Lost Time. |  | $\begin{gathered} \text { V. } \\ \text { Purchas- } \\ \text { ing Power } \\ \text { of } \\ \text { Money } \\ \text { mudex- } \\ \text { sumers. } \end{gathered}$ | Jfflective $\begin{aligned} & \text { fage }\end{aligned}$ Indek-Numbers. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 111. <br> Aetual. | $\begin{aligned} & \text { IV. } \\ & \text { Recom- } \\ & \text { puted. } \\ & (1911 \\ & =1,1500) . \end{aligned}$ |  | VI. $c_{\text {Full Work }}$ | $\begin{gathered} \text { VII. } \\ \text { Allowing } \\ \text { for } \\ \text { Unemploy. } \\ \text { ment. } \end{gathered}$ |
|  |  |  |  |  |  |  |  |  |  |
| 1906 |  | * | 886 | 6.6 | 808 | 848 | 980 | 960 | 9411 |
| 1907 | . | $\cdots$ | 803 | 5.7 | 842 | 884 | 897 | 906 | 986 |
| 1908 |  | . | 900 | 6.0 | - 840 | 888 | 951 | 946 | 934 |
| 1909 | . | $\cdots$ | 923 | 5.8 | 876 | 913 | 948 | 974 | 963 |
| 1910 |  | . | 955 | 7.6 | 901 | 945 | 970 | 985 | $97+$ |
| 1911 | . | . | 1,000 | 4.7 | 953 | 1,000 | 1,000 | 1,000. | 1,000 |
| 1912 | . |  | 1,051 | 5.5 | 098 | 1,042 | 1,101 | 955 | 948 |
| 1923 |  | $\cdots$ | 1,076 | 5.3 | 1,021 | 1,071 | 1,104 | 075 | 970 |
| 1914 |  |  | 1,085 | 11.0 | 966 | 1,014 | 1,140 | 052 | 889 |
| 1915 | . | ** | 1,102 | 6.8 | 1,027 | 1,078 | 1,278 | 862 | 844 |

$\uparrow$ As to the eflect in abroinal periods, see Section I V., par. 3 thereof, p. 20.
The above figures for the years 1906 to 1915 , inclusive, are shewn in the graph on page 74. It may be seen from the graph that the nominal wage index-number has steadily increased, and that the in crease has been at a somewhat greater rate (except in the years 1908, 1912, 1914, and 1915) than the increase in the purchasing-power-of-money index-numbers. Owing to the decreases in these years the effective wage index-numbers (both. "Full Work" and "Allowing for Unemployment") do not, on the whole, shew any general increase, but fluctuate between a range which reached its maximum in 1911, and its minimum in 1915. In $1907^{\circ}$ there was a large decrease in unemployment, which is reflected in the "peak" in the effective wage index-number for that year. The rise in the purchasing-power-of-money index-number 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 almost counterbalanced by the fall in 1912, which was due to the large increase in. the purchasing-power-ofmoney index-number and the smaller increase in unemployment. In 1913 the purchasing-power-of-money index-number was practically the same as that for 1912, while nominal wages increased and unemployment decreased, with the result that the effective wages index-numbers, both for full work and allowing for unemployment, shew an increase. The effective wage index-numbers for 1914 both shew a decrease since the

[^1]preceding year. This decrease is particularly marked in the case of the index-numbers in which allowance is made for unemployment. In 1915 there was a decrease in unemployment when compared with the preceding year, but on the other hand the cost of food and groceries shew a very substantial increase, so that while nominal wages increased slightly, effective wages index-numbers, both for full work and allowing for unemployment, shew a large decrease, and are, in fact, lower than for any other year covered by the investigation.

Unemployment, Purchasing-Power of Money; and Nominal and Effective Wages Index-Numbers, 1908 to 1915.


EXPL\&NATORT NOTE.-Each space in the horizontal scale represents one year. The verblcal spaces on the left represent the scale for the iodex-bimbers for purchasing-power of money and wages, wbile the scale on the right from 4 to 11 . represents the percentage of unemployment.
9. Relative Productive Activity and Effective Wages.-In Labour Report No. 5, p. 60, a table was given shewing the relative productive activity in the Commonwealth from 1891 to 1913. The necessary analysis of the data for the purpose of completing similar particulars for subsequent years is not yet available. The information will be published in the next Quarterly Bulletin:


[^0]:    - Or from any value to one-fourth greater.

[^1]:    *This expression must not be confused with "standard of living." A change th the standard of pivagg necesaarily invoives a change in regimen (see Labour 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 tot, resultin, or he aceompanied by, a change in the "stathdard of jiving."

