# COMMONWEALTH BUREAU OF CENSUS AND STATISTICS, . MELBOURNE, AUSTRALIA.

# LABOUR AND INDUSTRIAL BRANCH REPORT No 9,

# Prices, Purchasing-Power-of-Money, Wages, Trade Unions, Unemployment, and General Industrial Conditions, 1918.

## Prepared under instructions from the Minister of State for Home and Territories.

#### BY

#### G. H. KNIBBS, C.M.G.,

Honorary Fellow of the Royal Statistical Society, Honorary Member of the American Statistical Association, and of the Societé de Statistique de Páris, Membre de l'Institut International de Statistique, etc., etc., etc.

Commonwealth Statistician.

July, 1919.

By Authority: McCARRON, BIRD & CO., Printers, 479 Collins Street, Melbourne.

[C.S. No. 348.]



# SYNOPSIS.

٦

I	Page.
Section IIntroduction.	-
1. General	7 .
2. Sources of Information	÷
3. Classification of Industries	79
	_
-	
Section IL-Labour Organisations.	
1. General	10
2. Development of Trade Unions in	10
<ol> <li>Development of frade officials in the Commonwealth, 1906 to 1918</li> <li>Number and Membership of Trade Unions and Branches, 1912 to 1918</li> <li>Number of Unions and Membership</li> </ol>	10
Unions and Branches, 1912 to 1918	11
4. Number of Unions and Membership	
in Industrial Groups and in each	12
State, 1918 5. Percentage of Members of Unions on Total Number of Employees (0) users of one and over 1018	14
on Total Number of Employees	
	13
<ol> <li>Classification of Unions according to Number of Members, 1912 to 1918.</li> </ol>	14
<ol> <li>Classification of Unions according to Number of Members, 1912 to 1918</li> <li>Number and Membership of Federated</li> </ol>	
Unions, 1912 to 1918 8. Central Labour Organisations	15
8. Central Labour Organisations	16
9. Particulars of Unions registered under Commonwealth Concillation and	
Commonwealth Concillation and Arbitration Act, end of year 1918	17
Section IIIFluctuations in Employment	
and Unemployment.	i
1 General	18
a Number Unamplemed in Variant	
Industries, 1908 to 1938	18
8. Employment Index-numbers, 1891 to	19
4. Unemployment in Different Industries	15
1917 and 1918	19
5. Unemployment in each State, 1917	
and 1918 6. Causes of Unemployment, 1917 and	20
1918	21 .
	1
Section IV Retail Prices, House Bents, and	
Purchasing-Power of Money.	(
1. General 2. Changes in Cost of Commodifies,	22
2. Changes in Cost of Commontes, Standard of Living, and Expendi-	· ·
ture on Living	23
3. Commodities and Requirements in-	
cluded 4. Other Investigations as to Price	24
Indexes and Cost of Living	26
(i.) Price Indexes in 150 Towns	28
<ul> <li>(i.) Price Indexes in 150 Towns</li> <li>(ii.) Householders' Budget Inquiries</li> <li>5. Purchasng-power of Money—General Results of Investigation in each</li> </ul>	27
Results of Investigation in each	. I
Metropolican Town, 1901 to 1918	27
(I) Groceries	81
(ii.) Dairy Produce	31   31
(iii.) Meat (iv.) Food and Groceries (v.) House Rent (vi.) Price Index, Numbers for Food	81
(v.) House Rent	82
(The fille fille of the fille o	
Groceries and House Rent com- bined	32

_P:	age
Restion IV Refeil Prises WANSS Rents and	
Purchasing-Power of Money-cont. 6. Purchasing-Power of Money Index-	
Intillibers III various Lowins, 1912	33
(i) Roud and Groceries	42
(ii) House Rent	42
(iii.) Food, Groceries and House	
Rent combined	42 42
(iv.) Care to avoid erroneous com-	42
Darisons	42
7. Relative Cost of Food and Groceries	
and Housing Accommodation in different Towns, 1918	42
(i.) Food and Groceries	45
(ii.) House Rent.	45
(III.) POOD GEORGERIAS AND HOUSE	45
Rent combined 8. Purchasing power of Money, 1001 to	40
	45
(i.) Food and Groceries only (ii.) House Rent only	46
9. Monthly Fluctuations in Retail Prices	49
. of Food and Crosseins July 1014	
<ul> <li>b) Food and chorenes, only fort to May 1919</li> <li>10. Tables of Prices and House Rents, 1918</li> <li>11. Increase in Cast of Food and Groceries and House Rent, 1918, compared with prescious years</li> </ul>	48
10. Tables of Frices and House Kents, 1918 71 Increase in Cost of Food and Groceries	50
and House Rent. 1918. compared	
with previous years	50
Section V	
Section V.—Variation in Purchasing-Power- of-Money Index-Numbers in 150 Towns	
in the Commonwealth.	
1. Introduction 2. Index-numbers shewing Relative Pur-	52
chasing-power of Money	<b>52</b>
chasing-power of Money	56
4. House Rents 5. Food, Groceries and House Rent	57 58
6. Variation in Purchasing-nower of	90
Money index-Numbers, 1913 to 1918	59
7. Comparisons between Results obtained from Special Investigation and	
Quarterly Results	60
	••
Section VI.—Royal Commission of Inquiry	-
into the Costs of the Necessaries of Life in Western Australia, Result	
of the Budget Inquiry, 1917-18.	
2. The Householders' Budget	63 63
3. Tabulation and Classification	63
4. Family Conditions— (1.) General Membership (ii.) Conditions as to Children	
(i.) General Membership	64
5. Incomes—	64
(i.) Sources of Incomes	64
(ii.) Average Incomes	65
6. Expenditure—	65
(ii.) General Analysis of Expenditure	66
<ul> <li>(i.) Relative to Income</li> <li>(ii.) General Analysis of Expenditure</li> <li>(iii.) Expenditure on Clothing</li> <li>(iv.) Expenditure on other items</li> </ul>	67
(iv.) Expenditure on other items 7. Standard of Living—	68
(i.) General	68
(n.) Food Requirements	69
(iil.) Standard of Living (iv.) Quantities of Various Foods	70
consumed	71

SYNOPSIS.

r	πB≙' '	Page.
Section VIIWholesale Prices.		Section XVariations in Nominal and
1. General	72	Effective Wages-continued.
2. Commodities included and Methods	72	7. Nominal Wages and Effective Wages 98
adopted	78	8. Variations in Effective Wages in each State. 1901 to 1918
4. Variations in Price Levels of Com-	10	0 Variations in Effective Wages and
modity Groups for each Quarter		9. Variations in Effective Wages and Standard of Comfort, 1901 to 1918 103
of 1918	75	10. Relative Productivity and Effective
5. Variations in Price Levels since the		Wages
Outbreak of War	76	
6. Seasonal Fluctuations in Wholesale Prices 1918	, °	Section XI.—Operations under Arbitration
Prices 1918	76	and Wages Board Acts.
7. Table of Prices, 1917 and 1918	76	1. General
<b></b>	-	2. Boards Authorised and Awards, De-
Section VIIIImport and Export Price Index-		terminations and Agreements in
Numbers.		force (i.) New South Wales
1. General	77	
2. Index-numbers	77	1211 S. O
3. Variations in Price Levels of Com-	70	
modity Groups, 1917-18	78	(iv.) South Australia
4. Comparisons between Purchasing-		(vi.) Tasmania
power of Money, Wholesale, and Import and Export Index-numbers	78	(vil.) Commonwealth Arbitration
Alliport and Daparo Indea manons	·~ 1	Acts 117
Section IXCurrent Rates of Wage and	- 1	(viii.) War Precautions Coal Board ' 118
Bonra of Lahour		Section XIIChanges in Rates of Wage.
1. General	80	1. General
2. Weekly Rate of Wage Index-		(i.) Definition of a change in Rate
1. General. 2. Weekly Rate of Wage Index- numbers in States and in Classi-		of Wage
fied Industries, 1918	82	(ii.) Sources of Information 119
(i.) Weighted Average Nominal		(iii,) Collection of Particulars con-
Weekly Rate of Wage Payable		cerning Changes 120
to Adult Male Workers in	'	(iv.) Summary of Particulars tabul-
each State, 1918	82	lated
(ii.) Weighted Average Nominal Weekly Rate of Wage Payable		2. Number and Effect of Changes in each
to Adult Male Workers in each		State, 1913 to 1918
Industrial Group, 1918	82	3. Unanges in mates of wage in male and
(iii.) Weighted Average Nominal	01	Female Occupations; number and effect in each State, 1913-18
Weekly Rate of Wage Payable		(i.) Changes in Rates of Wage accord-
to Adult Female Workers in		ing to State
each State, 1918	83	4. Number and effect of Changes in Rates
(IV.) Weighted Average Nominal		of Wage in each State, classified
weekly Rate of Wage Payable		of Wage in each State, classified according to Industrial Groups 1918–124
to Adult Female Workers in		(i.) Changes in Rates of Wage, accord-
each Industrial Group, 1918	84	ing to Industrial Groups, 1918 124
3. Relative Weekly Wage and Wage		(ii.) Changes in Rates of Wage in
Index-numbers in each State, 1914	04	Female Occupations, according to Industrial Groups, 1918 126 (iii.) Changes in Rates of Wage in the
to 1918	84	to Industrial Groups, 1918 . 126
(i.) Weighted Average Rate of Wage Payable to Adult Male Workers in each State, 1914		(iii.) Changes in Rates of Wage in the
Workers in each State, 1914		Commonwealth, classified
to 1918	84	1913-18
(ii.) Weighted Average Bate of	••	1913-18
<ul> <li>(ii.) Weighted Average Rate of Wage payable to Adult Female</li> </ul>		5. Changes in Rates of Wage, classified according to Methods by which Effected, 1913 to 1918
Workers in each State, 1914-18 (iil.) Weighted Average Rate of Wage payable to Adult Male	86	Effected, 1913 to 1918 129
(iil.) Weighted Average Rate of		(1.) Commonwealth
Wage payable to Adult Male		(ii.) States and Territory
workers in each industrial		]
Group, 1914-18.	88	Bection XIII.—Industrial Disputes. 1. General
(iv.) Weighted Average Rate of		(i.) Collection of Particulars 132
Wage payable to Adult Female Workers in Industrial Groups,		(i.) Collection of Particulars 192 (ii.) Methods of Tabulation 133
1914-18	89	(iii.) Definitions and Explanations
4. Hours of Labour and HourlyRates of	- <sup>-</sup>	of Terms 133
Wage, 1918	90	(iv.) Other particulars 135 2. Industrial Disputes in each State,
(i.) Males	91	2. Industrial Disputes in each State,
	92	1913 to 1918
6. Relative Hours of Labour and Hourly		3. Particulars of Principal Disputes, 1918 138 4. Industrial Disputes in Industrial Groups, 1918
Rates of Wage, 1914 to 1918	92	4. Industrial Disputes in Industrial
		Groups, 1918
Section X Variations in Nominal and		5. Duration of Industrial Disputes, 1918 to 1918
Effective Wages.	64	to 1918
1. General 2. Weighted Average Nominal Weekly Bate of Wage in each and all States	94	(1.) Commonwealth 147 (il.) In each State and Territory 149
Rate of Wage in each and all States,		(iii.) In Industrial Groups
1914 to 1918	95	6. Causes of Industrial Disputes 151
(i.) Adult Male Workers	95	(i.) Commonwealth, 1913-18 151
(B.) Adult Female Workers	96	(ii.) States and Territory, 1918 153
3. Variations in Nominal Wage Index-		7. Results of Industrial Disputes 154
numbers in Industrial Groups, 1901	_	(i) Commonwealth, 1913-18 155
to 1918	96	(h.) Common Wealth, classified accord.
4. Variations in Nominal Wage Index-	05	ing to Causes and Results 155
numbers in States, 1901 to 1918	97	(iii.) In each State & Territory 1918 156
o. Average Nominal Weekly Wages in	07	8. Methods of Settlement of Industrial Disputes,
<ul> <li>bumbers in States, 1901 to 1918</li> <li>5. Average Nominal Weekly Wages in States, 1891 to 1918</li></ul>	97	Disputes,
Industrial Groups, 1891 to 1918	98	(ii.) States and Territory, 1918 160
and strain or other to read of the		(and source which relievely, 1910 100

Page.

P Section XIV.—State Free Employment Burea	age. uz.
1. General 2. Applications and Positions Filled,	162
1913 to 1918 - 3. Applications and Positions Filled in	162
each State, 1918	162
<ol> <li>Applications and Positions Filled in Various Industrial Groups, 1918</li> <li>Applications and Positions Filled,</li> </ol>	163
Males and Females, 1918	<b>J64</b> `
Section XV.—Assisted Immigrants.	
1. General	164
ing in each State, 1918	165
8. Number of Assisted Immigrants, classified in Industrial Groups, 1918	165.
Section XVIIndustrial Accidents.	
1. Scope of Investigation 2. Number of Accidents in each State.	166
1913 to 1918 3. Number of Accidents Reported	166
Quarterly in 1918 4. Number of Accidents Reported in	166
each Industrial Group, 1918,	167
5. Mining Accidents—Sources of In-	167
<ol> <li>Classification of Mining Accidents, 1918</li> <li>Number of Accidents per 1000 Per-</li> </ol>	167
sons Employed in Mining, 1917	169
-Section XVII.—International Labour Statist	ica.

1.	General			170
	Unemployment .			170
8.	Industrial Disputes .			170
4.	Price Index-Numbers	í in 🔻	rarious	
	nonnures—		÷.	
	(i.) Wholesale Prices			171
	(i.) Wholesale Prices (ii.) Retail Prices			172

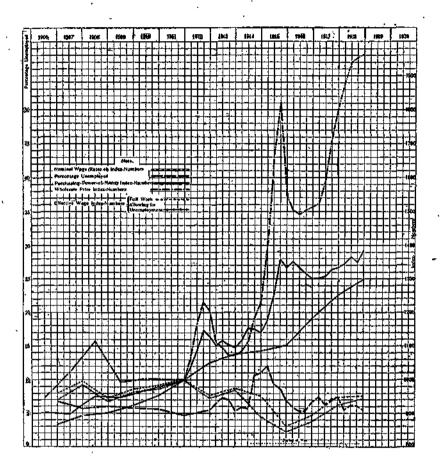
5. Effective Wage Index-numbers in each State and Commonwealth, 1906 to 101 102

· GRAPHS.

- 105
- 60 STAR STAR APPENDIXES. SES THE BA i.
  - 1. Price-Indexes, their Nature and Limita-tions, the Technique of Computing them, and their application in Ascer-taining the Purchasing-Power of Money  $174 \cdot 229$ 2 Retail Prices—Index-Numbers and Commodifies included in Investigations
  - 230-232 3.
  - Wholesale Prices ---Indexes-Number and Commodities included in Investiga-tions in various countries ... 233-239
     Retail Prices in 1918 ... 240-243
     Honse Rents in 1919 ... 244
     Wholesale Prices in 1917-18 ... 244
     Wholesale of Wage for Adult Male Workers, 31st Dec., 1918 240-265
     Minimum Rates of Wage for Adult Female Workers, 31st Dec., 1918
  - · 6.

    - 266-268

### Purchasing-Power-of-Money, Wholesale Prices, and Nominal and Effective Wage Index-Numbers, and Percentage of Unemployed.



EXPLANATORY NOTE.—The figures on the left represent the scale for the percentage of persons unemployed according to trade union returns. The figures on the right represent the scale for the several index-numbers, the year 1911 being taken in each case as base (= 1000). Since the end of the year 1911 the index-numbers for cost of foid, groceries, and house rent (average for the six metropolitan towns) and for wholesale prices (Melbourne) are shewn each quarter, while unemployment percentages are shewn quarterly since the end of the year 1912 only. Unemployment figures for previous years are shewn as at the end of each year, while other index-numbers refer to the average for the whole year. Nominal and effective wage index-numbers are only computed annually. It should be observed that the purchasing-power-of-money and wholesale price index-numbers since the year 1911 shew the average level during the whole of each quarter; but for purposes of convonience they have, however, been plotted on the graph as at the end, and not the middle, of each quarter. The purchasing-power-of-money index-number is based upon a constant regimen: see Report No. 1, Appendix wit, and Labour Bulletin No. 9, pp. 27 to 46.