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Historical Housing-related Statistics for Australia 1881-2011 – A Short Note

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**Historical Housing-related Statistics for Australia 1881-  
2011 – A Short Note**

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Abstract

This paper sets out annual series of economic, financial and demographic related to housing for Australia for the period 1881-2011. Some estimates are provided for 2012. The methodology used in constructing and/or splicing the various series are stated and explained.

Key words: Australia, housing stock, adult population, dwelling inflation.

JEL Code: G12; N97; R21; R31; R38

## 1. Introduction

This paper sets out annual series of supply and demand factors related to housing for Australia for the period 1880-2012. This is an update and contains a number of minor revisions on the author's original estimates.<sup>1</sup> No commentary on the short or long-term trends data is provided.

On the supply side, there are series for the total and occupied dwelling stock in Table 1 which have been constructed using Census estimates as benchmarks. On the demand side for housing, estimates of numbers of households and the adult population are also shown in Table 1. The standard measure of households is based on data on occupied dwellings so its movement will tend to correspond with movements in supply. Changes in adult population provide a better measure of changes in potential demand as it includes both satisfied demand (occupiers) and unsatisfied demand of households sharing an occupied dwelling. Changes in adult population will also tend to capture the cyclical movements in net immigration which is skewed to adults.

The paper also includes estimates of long-term inflation series related to housing which are set out in Table 2.

## 2. Stock of Housing

Annual estimates for the stock of occupied dwellings, for all dwellings (including unoccupied dwellings), and for all privately owned dwellings for 1880-2012 are shown in Table 1. The methodology follows that of ABS 5216.0 (2000). Commonwealth census data from 1911 to 2011 and for the States for the period 1881-1901 provides regular benchmark measures of the number of occupied and unoccupied private dwellings. In this instance private refers not to ownership but to the occupants being a private household. Non-private dwellings refer to hotels, boarding houses, hospitals and retirement homes with multiple individual occupants.

The numbers of occupied and unoccupied private dwellings is a close approximation to the number of housing structures. The estimates of numbers of private dwellings do include a small component of occupied dwellings which are part of a house. As these parts of a house are not separate structures would be sold with the house, these are deducted from the total to give a measure of the 'saleable' housing stock. The estimates include a component of temporary dwellings but it is not material and as over time many of these have probably been upgraded to permanent dwellings, no adjustment is made for this component.

The Census estimates give regular benchmark estimates of the residential housing stock number at regular intervals from 1881 to 2011. For the period from 1946-2012, there are fiscal year estimates of new dwelling completions available which can be used to derive estimates of the stock number in the years between census years.<sup>2</sup> The discrepancy between estimates of new dwellings completed in each period between censuses and the increase in

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<sup>1</sup> Stapledon (2007), Appendix B

<sup>2</sup> ABS Cat. 8752.0 Building Activity, Australia for period from 1955/56. Commonwealth Yearbook 39,43 (1953, 1957) for 1945/46-1954/55

dwelling implied from the census estimates is taken to reflect an estimate of the numbers of old stock demolished in the period. It is assumed that the rate of demolition of old stock is pro-rata with the rate of completions in each period and the resultant rate of 'net' completions gives estimates for the dwelling stock. This methodology for constructing estimates of the stock of housing is used by the ABS.<sup>3</sup>

For the period 1881-1939, Noel Butlin's annual estimates of the number of rooms have been used to estimate the change in the number of houses between censuses.<sup>4</sup> As the number of rooms per dwelling barely changed in the period 1911-1961, changes in the Butlin measure will be a close approximation to the change in number of houses.<sup>5</sup> I have used my discretion to adjust a few of his estimates which appeared difficult to explain. For example, there was a one-off spike in the rate of growth in housing stock (rooms) in 1932/33 (in the midst of the depression) and a big spike in 1906/07 which also looked very curious. Rather than accept these rogue numbers, I have modified the numbers around it to take out these spikes. Building permit numbers for NSW did not support any sort of sudden recovery then fall-back in 1932/33. For the period between 1939/40-1944/45 ABS building permit data are used to provide a profile.

Public rental housing is only a relatively small share of the Australian market. There are estimates of the proportion of public dwellings with tenants of a government from the 1954 census when 4.2% of dwellings were recorded being occupied by tenants of a government. Thereafter, the proportion increased slightly to about 5% in 1966, a figure around which it has hovered since then. The evidence points to a lower level of public housing before 1954. Butlin (1962)'s estimates of public capital spending record nil public investment in residential structures in the period 1861-1911, then sporadic investment 1911-21, a reasonable level in 1921-33, then limited until the post-WW2 period when Government rent controls arguably "created" the need for public housing.<sup>6</sup> Based on Butlin's estimates of the public share of capital spending on housing in the pre-WW2 period, public housing is estimated at about 1% of the housing stock in 1921, rising to 2% in 1933 and at about that level in 1947, before rising sharply in the period 1947-54. Between censuses, it is simply assumed that the rate of public ownership changes pro-rata.

### 3. Population

Measures of adult population and households have been constructed. Mankiw and Weil (1991) constructed a complex measure of housing demand, aggregating the consumption of housing by age group. However, as Mankiw and Weil observed, that measure, by dint of the low consumption of housing by children, turned out to be highly correlated with a simpler measure of adult population. Hall (1963) had constructed a simple measure of 20-34 year olds as a measure of housing demand for Australia on the basis that this was the period when adults formed households and created demand for housing. There

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<sup>3</sup> ABS 5216.0 Australian National Accounts: Concepts, Sources and Methods, 2000

<sup>4</sup> Butlin (1962). Butlin assumed a pro-rata change in rooms per dwelling between census years, so reversing this, the estimates would approximate to Butlin's unpublished estimates of the housing stock.

<sup>5</sup> Butlin no doubt had a measure of the number of houses in his workings but essentially the same result is achieved by this expedient.

<sup>6</sup> The rent controls made private rental housing unprofitable and, in combination with a sharp increase in the numbers of new immigrants, created a shortage of housing.

will be a close approximation between the broad trends shown by the two (i.e. adults vs. 20-34 years) but as net demand will be a function of both gross additions (moving into 20-34 years bracket) and gross subtractions (moving into deceased and nursing home bracket), adult population will probably be a better measure. It is also the case that demand for second homes will be more a function of adults over 35 years of age, and this has been a factor in demand for housing, particularly in the post-WW2 period.

An issue with a measure of the adult population is that at some age a higher proportion of the adult population will shift to aged care facilities, part of non-private dwelling stock. While that creates demand for land for those facilities, the space per person will be significantly less. Empirically, it has probably not been a significant factor to date. However, with significant growth in the person 80/85+ projected for the future, measures of adult population may overstate future demand.

Long-term estimates of the population of the capital cities are provided in Table 1. A feature of Australia in the first half of the 20<sup>th</sup> century was the increased share of the population in the six state capital cities. The share rose from 36% in 1901 to 54% in 1954. It rose further but essentially plateaued out from the 1970s at about 62%, with growth shifting to other coastal urban areas such as the Gold Coast.

The population and adult population series in Table 1 are based on an historical series from the ABS which covers the period from 1861. This series provides a split by states and by capital cities at 10 yearly intervals from 1861-1901, five yearly intervals to 1916 and annually from 1920 onwards. It also disaggregates the national data by age groups at 10 yearly intervals from 1861-1921 and then annually from 1921. For the missing years in the period 1861-1921, the assumption is made that the shares by age and capital city have changed at a constant rate in the intervening years. The ABS has regularly widened the geographic definition of the capital cities as their boundaries have expanded and this creates some one-off spikes in capital city shares. To smooth that effect out, and reflect the reality that these new areas were effectively part of the capitals prior to the ABS including them, I have made the assumption that these new areas were added to the capital cities over the preceding ten year period

#### 4. Household numbers

It is common to use estimates of the number of households as an estimate of demand for housing. The Census estimates of occupied private dwellings are a close approximation to the number of households. It is not precise as an occupied dwelling can include, in small number of instances, two or more households and also because a small proportion of the population live in boarding houses, hospitals, hotels and other non-private dwellings. The first factor is quite small. The proportion of the population in non-private dwellings was 8.1% in 1911 and had declined to 3.0% in the 2001. That shift from non-private dwellings to private dwellings would have been a factor contributing at the margin to the growth in households (over and above that from population growth) in that period.

In terms of demand, measures of numbers of households are in theory preferable to estimates of population. However, as measures of households are based on numbers of occupied dwelling, they have the inherent problem of being both a measure of demand and supply. For that reason, measures of numbers of households are useful only to indicate long-term trends in demand. One popular way of observing trends is to observe the trend

movement in persons per household. For observation of shorter term variations in demand, adult population is a better measure.

## 5. Inflation

The inflation indexes set out in Table 2 are spliced from various historical series. For the general (consumer) prices series, for period from 1959/60 the implicit price deflator for household final consumption expenditure from the ABS National Accounts has been used. The preference for the consumption deflator over the CPI series for this period is for two reasons. Firstly it avoids the breaks in series when, for example, the ABS added in then later subtracted mortgage interest rates. Secondly, the US Federal Reserve Board has a strong preference for consumption deflators over the CPI series because of the broader range of goods and services covered.<sup>7</sup> Gordon (2006) has also observed that the consumption deflator has substantially less upward substitution and quality bias in its measurement, also supporting the FRB's preference for the broader measure.

For the period 1948/49-1959/60, the CPI index for the six capital cities has been used. For the period 1913/14-1948/49, the C series retail price index for the six capital cities has been used and for the period 1900/01-1913/14, the A series retail price for the six capital cities index has been used. The best official measure of prices prior to 1901 is the Sydney retail price index. That Sydney series comprised only seventeen items (vs. 46 for the A series) but shows a similar movement in the period 1901-1910 when it overlapped the A series. Both the A series and the Sydney series exhibit significantly more volatility than the following C series, which contained a much broader basket of goods designed to match total household spending. The volatility of the A and Sydney series in turn generate, what should be at least partly, artificial volatility in the real measures derived using them. To some extent, inflation may have become less volatile but the suspicion is that the reduced volatility is to some degree at least a function of improved measurement. To take out most of that apparent artificial volatility, a trend measure of the A and Sydney series for the period 1881-1911 is used.

The rental price series is based on corresponding series to those used for the consumer price series. That is the national accounts deflator for rents from 1959/60 spliced with the various A/C/CPI series from 1901-1959/60. For the GDP and dwelling construction cost inflation series, the ABS national accounts series for these measures for the period from 1959/60 have been spliced with the Butlin (1977) series for the prior period.

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<sup>7</sup> US Federal Reserve *Board Frequently Asked Questions*. Downloaded October 2012 from: [http://www.federalreserve.gov/faqs/economy\\_14419.htm](http://www.federalreserve.gov/faqs/economy_14419.htm)

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Table 1. Historical data – Housing stock and population

June	Stock of housing			Population		Persons per Household	Adult Population
	Total occupied dwellings	Total dwellings	Total privately owned	Aust.	6CC	Aust.	Aust.
	1	2	3	4	5	6	7
	No. million	No. mn	No. mn	No. mn	% share	No.	No. mn
1881	0.42	0.45	0.45	2.36	29.3%	5.62	1.18
1882	0.44	0.46	0.46	2.45	29.7%	5.57	1.23
1883	0.47	0.49	0.49	2.57	30.1%	5.47	1.30
1884	0.49	0.52	0.52	2.67	30.7%	5.45	1.36
1885	0.51	0.54	0.54	2.76	31.6%	5.41	1.41
1886	0.53	0.56	0.56	2.86	32.3%	5.40	1.47
1887	0.55	0.59	0.59	2.95	33.1%	5.36	1.53
1888	0.58	0.62	0.62	3.06	33.9%	5.28	1.59
1889	0.59	0.63	0.63	3.14	34.8%	5.32	1.65
1890	0.61	0.65	0.65	3.23	35.4%	5.30	1.70
1891	0.62	0.67	0.67	3.32	35.5%	5.35	1.76
1892	0.63	0.68	0.68	3.39	35.1%	5.38	1.80
1893	0.64	0.69	0.69	3.45	34.5%	5.39	1.84
1894	0.65	0.70	0.70	3.51	34.4%	5.40	1.88
1895	0.67	0.72	0.72	3.58	33.9%	5.34	1.92
1896	0.68	0.73	0.73	3.64	34.8%	5.35	1.96
1897	0.69	0.74	0.74	3.71	35.1%	5.38	2.01
1898	0.70	0.75	0.75	3.76	35.6%	5.37	2.04
1899	0.71	0.75	0.75	3.81	35.9%	5.37	2.07
1900	0.72	0.76	0.76	3.86	36.2%	5.36	2.11
1901	0.73	0.77	0.76	3.92	36.3%	5.37	2.15
1902	0.75	0.79	0.78	3.98	36.6%	5.31	2.19
1903	0.77	0.81	0.79	4.03	36.7%	5.23	2.23
1904	0.78	0.82	0.80	4.08	36.8%	5.23	2.27
1905	0.79	0.83	0.82	4.14	37.0%	5.24	2.32
1906	0.81	0.84	0.83	4.20	37.5%	5.19	2.37
1907	0.82	0.86	0.84	4.26	37.7%	5.20	2.42
1908	0.84	0.88	0.86	4.33	37.9%	5.15	2.47
1909	0.86	0.90	0.88	4.42	37.9%	5.14	2.54
1910	0.88	0.91	0.90	4.51	38.0%	5.13	2.61
1911	0.89	0.93	0.92	4.64	38.3%	5.21	2.70
1912	0.93	0.96	0.95	4.81	38.7%	5.17	2.80
1913	0.96	1.00	0.99	4.98	39.1%	5.19	2.91
1914	1.00	1.04	1.03	5.11	39.7%	5.11	2.99
1915	1.00	1.05	1.04	5.18	40.2%	5.18	3.04
1916	1.02	1.06	1.05	5.25	41.0%	5.15	3.09
1917	1.02	1.07	1.06	5.32	41.6%	5.22	3.14
1918	1.03	1.07	1.06	5.40	42.0%	5.24	3.19
1919	1.05	1.10	1.09	5.47	42.3%	5.21	3.25
1920	1.08	1.13	1.12	5.55	42.9%	5.14	3.30
1921	1.11	1.16	1.15	5.64	43.6%	5.08	3.37
1922	1.14	1.19	1.18	5.76	44.0%	5.05	3.44
1923	1.17	1.23	1.21	5.89	44.4%	5.03	3.53



	1	2	3	4	5	6	7
1924	1.21	1.27	1.25	6.01	44.7%	4.97	3.61
1925	1.26	1.32	1.31	6.14	45.0%	4.87	3.70
1926	1.31	1.37	1.35	6.26	45.3%	4.78	3.79
1927	1.36	1.42	1.40	6.39	45.5%	4.70	3.88
1928	1.41	1.47	1.45	6.51	45.8%	4.62	3.98
1929	1.45	1.52	1.49	6.61	47.3%	4.56	4.05
1930	1.47	1.54	1.51	6.68	47.0%	4.54	4.12
1931	1.49	1.56	1.53	6.74	46.8%	4.52	4.19
1932	1.50	1.57	1.54	6.79	46.9%	4.53	4.26
1933	1.51	1.58	1.55	6.85	46.8%	4.54	4.33
1934	1.52	1.59	1.56	6.90	46.8%	4.54	4.40
1935	1.54	1.61	1.57	6.95	46.7%	4.51	4.48
1936	1.57	1.63	1.60	7.00	46.7%	4.46	4.55
1937	1.60	1.67	1.63	7.06	46.6%	4.41	4.62
1938	1.64	1.70	1.66	7.12	46.7%	4.34	4.68
1939	1.68	1.74	1.70	7.20	46.8%	4.29	4.75
1940	1.72	1.78	1.74	7.27	47.3%	4.23	4.83
1941	1.75	1.81	1.77	7.34	48.3%	4.19	4.91
1942	1.79	1.84	1.81	7.41	49.0%	4.14	4.98
1943	1.79	1.85	1.81	7.47	49.7%	4.17	5.03
1944	1.80	1.85	1.81	7.55	50.1%	4.19	5.09
1945	1.80	1.85	1.81	7.63	50.3%	4.24	5.15
1946	1.82	1.87	1.83	7.71	50.4%	4.24	5.20
1947	1.87	1.92	1.88	7.82	50.7%	4.18	5.25
1948	1.92	1.97	1.93	7.95	50.5%	4.14	5.33
1949	1.97	2.04	1.98	8.16	50.2%	4.14	5.46
1950	2.03	2.10	2.04	8.44	49.9%	4.16	5.62
1951	2.10	2.18	2.11	8.69	49.6%	4.14	5.76
1952	2.18	2.27	2.19	8.91	49.3%	4.09	5.87
1953	2.26	2.37	2.32	9.09	49.2%	4.02	5.94
1954	2.34	2.46	2.35	9.26	53.6%	3.96	6.01
1955	2.41	2.53	2.43	9.48	53.9%	3.93	6.10
1956	2.47	2.60	2.49	9.72	54.2%	3.94	6.20
1957	2.52	2.66	2.55	9.94	54.6%	3.94	6.31
1958	2.58	2.73	2.62	10.14	54.9%	3.93	6.40
1959	2.64	2.81	2.69	10.36	55.2%	3.92	6.49
1960	2.71	2.89	2.77	10.59	55.5%	3.91	6.60
1961	2.78	2.98	2.86	10.81	60.1%	3.89	6.70
1962	2.85	3.05	2.92	11.01	60.5%	3.86	6.80
1963	2.91	3.13	2.99	11.23	60.9%	3.86	6.90
1964	2.98	3.22	3.07	11.45	61.3%	3.84	7.03
1965	3.07	3.32	3.16	11.68	61.8%	3.80	7.17
1966	3.16	3.42	3.25	11.89	62.2%	3.76	7.30
1967	3.24	3.52	3.35	12.10	62.6%	3.73	7.48
1968	3.34	3.63	3.45	12.31	63.0%	3.69	7.64
1969	3.44	3.75	3.56	12.57	63.4%	3.65	7.82
1970	3.56	3.88	3.68	12.82	63.9%	3.60	8.00
1971	3.67	4.01	3.81	13.07	64.0%	3.56	8.18
1972	3.77	4.13	3.92	13.30	63.9%	3.53	8.35
1973	3.87	4.25	4.03	13.50	63.8%	3.49	8.51
1974	3.97	4.37	4.14	13.72	63.7%	3.46	8.69

	1	2	3	4	5	6	7
1975	4.06	4.48	4.25	13.89	63.6%	3.42	8.84
1976	4.14	4.57	4.34	14.03	63.6%	3.39	8.99
1977	4.26	4.70	4.46	14.19	63.5%	3.33	9.14
1978	4.37	4.81	4.57	14.36	63.4%	3.29	9.31
1979	4.46	4.91	4.66	14.52	63.3%	3.26	9.48
1980	4.56	5.02	4.76	14.70	63.1%	3.22	9.68
1981	4.67	5.14	4.87	14.92	62.9%	3.19	9.90
1982	4.78	5.26	4.99	15.18	62.8%	3.18	10.15
1983	4.87	5.37	5.09	15.39	62.7%	3.16	10.36
1984	4.96	5.48	5.20	15.58	62.7%	3.14	10.56
1985	5.08	5.60	5.32	15.79	62.6%	3.11	10.76
1986	5.19	5.73	5.44	16.02	62.6%	3.09	10.97
1987	5.29	5.84	5.54	16.26	62.6%	3.07	11.19
1988	5.39	5.95	5.64	16.53	62.6%	3.07	11.43
1989	5.52	6.09	5.77	16.81	62.6%	3.05	11.68
1990	5.65	6.24	5.91	17.07	62.5%	3.02	11.91
1991	5.77	6.36	6.03	17.28	62.4%	2.99	12.13
1992	5.89	6.50	6.16	17.49	62.4%	2.97	12.36
1993	6.04	6.67	6.31	17.67	62.4%	2.93	12.54
1994	6.20	6.85	6.48	17.85	62.4%	2.88	12.72
1995	6.36	7.03	6.64	18.07	62.5%	2.84	12.91
1996	6.50	7.18	6.78	18.31	62.6%	2.82	13.12
1997	6.60	7.29	6.89	18.52	62.6%	2.81	13.31
1998	6.71	7.41	7.00	18.71	62.6%	2.79	13.49
1999	6.83	7.54	7.13	18.93	62.6%	2.77	13.67
2000	6.96	7.69	7.27	19.15	62.7%	2.75	13.86
2001	7.07	7.81	7.39	19.41	62.7%	2.75	14.07
2002	7.16	7.92	7.52	19.65	62.7%	2.74	14.29
2003	7.27	8.05	7.67	19.90	62.8%	2.74	14.52
2004	7.38	8.18	7.81	20.13	62.8%	2.73	14.73
2005	7.49	8.32	7.97	20.39	62.8%	2.72	14.97
2006	7.60	8.45	8.11	20.70	62.8%	2.72	15.23
2007	7.72	8.59	8.24	21.02	63.0%	2.72	15.51
2008	7.83	8.72	8.36	21.38	63.2%	2.73	15.82
2009	7.94	8.78	8.42	21.78	63.4%	2.74	16.15
2010	8.06	8.90	8.53	22.07	63.6%	2.74	16.42
2011	8.18	9.02	8.67	22.32	63.8%	2.73	16.66
2012	8.29	9.27	8.91	22.68		2.74	16.92

Notes to Table. All numbers expressed in millions except columns 5 and 6. Methodology as described in text.

1. Total occupied dwellings: all dwellings, whether owned by private or public sector, occupied by private households (ABS *Census*, various years). Excludes shares of dwellings and 'non-private' dwellings such as boarding houses, hotels, etc. Estimates of dwelling completions from ABS *Building Activity, Australia Cat. No. 8752.0* and *Commonwealth Yearbook* 39 (1953), 43 (1957) for earlier data 1945/46-1954/55.

2. Total dwellings: occupied plus unoccupied dwellings.

3. Total private dwellings: the share of dwellings owned by private sector.
4. Population: total population from ABS Australian Historical Population Statistics 2006 Cat No. 3105.0.65.001. Updated from Australian Demographic Statistics Cat. No. 3101.0, Mar 2012: Table 59
5. Six State capital cities % share of Australian population. As per Note 4 and updated with ABS Regional Population Growth 2011 Cat. No. 3218.0: Table 4 - Estimated Resident Population, Greater Capital City Statistical Areas (GCCSAs), Australia, 1971–2011.
6. Persons per household is ratio of population [4] to occupied dwellings [1].
7. Australian Adult Population: Persons aged 18 years and above. Sources as per Note 4.

Table 2. Inflation measures

Indexed to: 2010/11 = 100	Consumer price series		Rental price series		GDP	Dwelling construction
	<i>1</i>		<i>2</i>		<i>3</i>	<i>4</i>
June/FY	June	FY	June	FY	FY	FY
1881	1.54	1.60	1.44	1.29	1.09	0.74
1882	1.55	1.62	1.47	1.35	1.10	0.72
1883	1.56	1.63	1.51	1.38	1.10	0.72
1884	1.57	1.64	1.54	1.41	1.09	0.69
1885	1.57	1.64	1.52	1.45	1.09	0.74
1886	1.57	1.64	1.52	1.42	1.08	0.71
1887	1.56	1.63	1.51	1.42	1.08	0.70
1888	1.54	1.61	1.59	1.42	1.08	0.70
1889	1.52	1.59	1.65	1.50	1.09	0.74
1890	1.50	1.56	1.56	1.55	1.09	0.75
1891	1.47	1.53	1.42	1.46	1.09	0.74
1892	1.44	1.50	1.23	1.33	1.08	0.59
1893	1.41	1.47	1.19	1.15	1.08	0.54
1894	1.38	1.44	1.13	1.11	1.06	0.51
1895	1.36	1.42	1.09	1.06	1.07	0.53
1896	1.34	1.40	1.05	1.02	1.07	0.53
1897	1.33	1.39	1.07	0.98	1.08	0.52
1898	1.33	1.39	1.13	1.01	1.07	0.59
1899	1.33	1.39	1.20	1.06	1.09	0.63
1900	1.34	1.40	1.22	1.13	1.09	0.65
1901	1.35	1.41	1.20	1.14	1.11	0.70
1902	1.37	1.44	1.21	1.13	1.07	0.69
1903	1.38	1.38	1.21	1.14	1.10	0.67
1904	1.40	1.37	1.23	1.15	1.04	0.65
1905	1.42	1.41	1.25	1.17	1.04	0.62
1906	1.45	1.40	1.26	1.19	1.08	0.58
1907	1.48	1.44	1.30	1.23	1.06	0.77
1908	1.53	1.48	1.34	1.27	1.14	0.87
1909	1.58	1.50	1.38	1.32	1.18	0.66
1910	1.64	1.54	1.47	1.42	1.21	0.59
1911	1.71	1.97	1.59	1.53	1.22	0.53
1912	1.79	1.72	1.68	1.62	1.33	0.76
1913	1.81	1.75	1.74	1.67	1.32	0.92
1914	1.90	1.89	1.71	1.64	1.41	0.93
1915	2.08	2.03	1.67	1.60	1.55	0.94
1916	2.19	2.06	1.68	1.61	1.61	0.98
1917	2.30	2.09	1.73	1.66	1.75	1.03
1918	2.48	2.24	1.82	1.75	1.85	1.12
1919	2.76	2.57	1.97	1.89	1.95	1.19
1920	3.15	2.72	2.11	2.03	2.26	1.44
1921	2.81	2.57	2.22	2.14	2.20	1.49
1922	2.66	2.58	2.34	2.24	2.08	1.49

June/FY	1		2		3	4
	June	FY	June	FY	FY	FY
1923	2.76	2.64	2.44	2.34	2.21	1.51
1924	2.73	2.76	2.54	2.44	2.21	1.51
1925	2.80	2.73	2.59	2.53	2.27	1.55
1926	2.87	2.83	2.64	2.56	2.26	1.54
1927	2.78	2.80	2.64	2.59	2.26	1.56
1928	2.85	2.82	2.74	2.65	2.29	1.55
1929	2.89	2.85	2.76	2.70	2.30	1.55
1930	2.79	2.84	2.74	2.71	2.07	1.54
1931	2.47	2.57	2.36	2.46	1.88	1.48
1932	2.35	2.37	2.11	2.15	1.74	1.40
1933	2.25	2.26	2.07	2.03	1.71	1.42
1934	2.29	2.26	2.07	2.03	1.77	1.39
1935	2.32	2.30	2.14	2.08	1.83	1.40
1936	2.36	2.34	2.24	2.16	1.91	1.41
1937	2.43	2.41	2.33	2.26	2.02	1.48
1938	2.51	2.47	2.41	2.34	2.05	1.52
1939	2.57	2.54	2.48	2.41	2.10	1.57
1940	2.67	2.60	2.50	2.45	2.16	1.67
1941	2.80	2.75	2.51	2.46	2.18	1.91
1942	3.03	2.91	2.51	2.46	2.21	1.98
1943	3.21	3.14	2.51	2.46	2.33	2.33
1944	3.15	3.14	2.51	2.46	2.40	2.43
1945	3.15	3.14	2.51	2.46	2.49	2.45
1946	3.21	3.17	2.51	2.46	2.68	2.52
1947	3.29	3.24	2.51	2.46	2.94	2.57
1948	3.58	3.52	2.51	2.47	3.27	2.57
1949	3.93	3.78	2.52	2.47	3.59	2.93
1950	4.30	4.13	2.53	2.48	3.92	3.25
1951	5.11	4.71	2.59	2.52	4.92	3.67
1952	6.19	5.79	2.68	2.58	5.13	4.39
1953	6.43	6.31	2.92	2.79	5.86	4.98
1954	6.52	6.49	3.06	2.93	6.03	5.03
1955	6.66	6.55	3.14	3.06	6.06	5.28
1956	7.09	6.87	3.39	3.22	6.26	5.60
1957	7.21	7.20	3.53	3.41	6.68	5.71
1958	7.31	7.22	3.74	3.57	6.69	5.81
1959	7.51	7.40	3.92	3.79	6.69	5.83
1960	7.90	7.70	4.30	4.03	7.00	5.90
1961	8.10	8.03	4.62	4.50	7.25	6.08
1962	8.10	8.08	4.88	4.77	7.23	6.10
1963	8.20	8.18	5.11	5.03	7.40	6.10
1964	8.40	8.30	5.36	5.28	7.58	6.25
1965	8.70	8.55	5.55	5.48	7.85	6.38
1966	9.00	8.88	5.79	5.70	8.05	6.60
1967	9.30	9.13	6.11	5.97	8.43	6.83

June/FY	1		2		3	4
	June	FY	June	FY	June/FY	June
1968	9.60	9.48	6.46	6.33	8.65	7.00
1969	9.90	9.78	6.90	6.72	9.03	7.20
1970	10.40	10.20	7.45	7.23	9.48	7.55
1971	11.10	10.80	8.18	7.95	9.98	7.93
1972	11.80	11.55	8.93	8.66	10.60	8.53
1973	12.70	12.30	9.71	9.41	11.55	9.35
1974	14.50	13.78	10.88	10.43	13.45	11.53
1975	17.10	16.23	12.99	12.23	15.70	13.98
1976	19.70	18.80	15.26	14.52	17.85	16.05
1977	21.70	20.93	17.51	16.75	19.93	18.05
1978	23.50	22.85	19.35	18.69	21.58	19.13
1979	25.80	24.95	21.26	20.57	23.43	19.73
1980	28.40	27.40	23.19	22.43	25.73	21.13
1981	31.10	30.13	25.44	24.53	28.23	23.75
1982	34.20	32.95	27.83	26.91	31.55	26.70
1983	37.70	36.53	30.28	29.54	34.85	29.23
1984	40.10	39.20	32.00	31.32	37.45	30.70
1985	42.80	41.58	33.95	33.11	39.20	32.88
1986	45.80	44.65	37.07	35.91	41.50	35.70
1987	49.80	48.48	39.98	38.80	44.35	37.85
1988	53.30	51.93	44.34	42.73	47.75	40.38
1989	56.90	55.43	48.78	47.18	52.13	47.25
1990	60.60	59.15	52.11	50.98	55.45	52.78
1991	62.90	62.30	54.21	53.63	57.03	54.60
1992	64.20	63.98	54.94	54.81	57.83	54.95
1993	65.70	65.13	55.30	55.16	58.33	55.28
1994	66.70	66.33	55.50	55.46	58.88	56.40
1995	68.50	67.63	56.16	55.78	60.20	57.78
1996	70.20	69.68	57.19	56.78	61.78	57.95
1997	71.30	70.88	58.95	58.24	62.45	58.90
1998	72.60	72.18	60.64	59.99	63.25	58.40
1999	73.10	72.85	62.03	61.52	63.65	59.70
2000	75.00	74.20	63.67	62.80	65.33	63.38
2001	78.40	77.55	65.56	64.77	68.35	68.30
2002	80.30	79.50	67.33	66.76	70.28	69.98
2003	82.20	81.78	68.34	67.96	72.23	72.73
2004	83.10	82.73	69.83	69.22	74.58	77.23
2005	84.50	83.88	71.35	70.69	77.25	81.35
2006	87.70	86.40	73.67	72.66	81.10	84.58
2007	90.70	89.33	79.34	76.72	84.95	86.88
2008	93.60	92.45	86.97	84.14	88.93	91.28
2009	96.00	95.33	92.66	90.47	93.58	94.50
2010	98.80	97.83	97.37	95.56	94.40	97.40
2011	101.10	100.00	101.88	100.00	99.95	100.08
2012	103.00	102.15	106.57	104.72	101.50	100.98

Notes to Table. Methodology as described in text.

1. Consumer price series. This is the ABS A, C and CPI series from 1901-1959 (ABS Labour Reports) and the ABS national accounts consumption deflator (ABS 5206.0) from 1960 to date. For the years prior to 1901, the Sydney retail price series (ABS Labour Report) has been used. As discussed in text, the series from 1881-1911 is a trend of the original series, which takes out some of the volatility in the original series.
2. Rental price series. Spliced from the ABS A, C and CPI rental price series from 1901-59 (ABS Labour Reports) and the ABS national accounts gross rental deflator (ABS 5206.0) from 1960 to date. Movement in the national accounts rental series is based on the CPI estimates and, reflecting that, the two series are highly correlated. In the 1960s, the rental price series in the CPI was not published as a separate item but as part of housing cost component of the CPI. Hence, the national accounts provide a continuing series 1960-2012.
3. GDP deflator: Estimates from Butlin (1977) for the years prior to 1960 and ABS national accounts implicit price deflator estimates (ABS 5206.0) from 1960 to date.
4. Dwelling construction deflator: Estimates from Butlin (1977) for the years prior to 1960 and ABS national accounts dwelling construction deflator (for new dwellings and alterations and additions) estimates (ABS 5206.0) from 1960 to date.