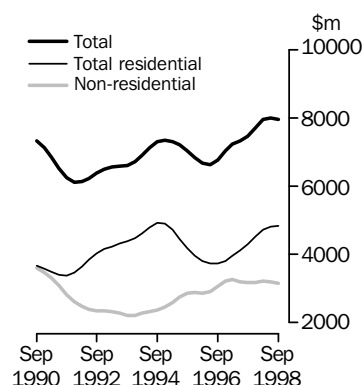


Value of work done

Volume terms
Trend estimates



SEPTEMBER QTR KEY FIGURES

	Sept qtr 98 \$m	Jun qtr 98 to Sept qtr 98 % change	Sept qtr 97 to Sept qtr 98 % change
TREND ESTIMATES (a)			
Value of work done	7 962.6	-0.6	6.6
Total residential building	4 839.6	0.3	12.5
New houses	2 877.1	-0.5	10.6
Non-residential building	3 152.1	-1.2	-0.4
.....			
	Sept qtr 98 \$m	Jun qtr 98 to Sept qtr 98 % change	Sept qtr 97 to Sept qtr 98 % change
SEASONALLY ADJUSTED (a)			
Value of work done	7 842.8	-2.0	5.8
Total residential building	4 707.8	-4.3	10.8
New houses	2 807.3	-3.9	9.2
Non-residential building	3 157.7	2.2	-0.7

(a) Chain volume measures, reference year 1996-97.

SEPTEMBER QTR KEY POINTS

VALUE OF WORK DONE, VOLUME TERMS

TREND ESTIMATES

- After rising for the previous eight quarters the trend estimate of building work done has levelled off. However, it is still 6.6% higher than a year ago.
- Total residential building was steady following rises of 4.3% and 2.1% in the March and June quarters respectively. The latest figure was still 12.5% above the level of a year ago. Work done on new houses fell marginally during the quarter.
- Non-residential building fell by 1.2% in the quarter following a fall of 1.1% in the June quarter.

SEASONALLY ADJUSTED ESTIMATES

- The total value of building work done fell by 2.0%, but was still 5.8% above the level of a year ago.
- Total residential building work fell by 4.3% to \$4,707.8m while non-residential building increased by 2.2% to \$3,157.7m.

- For further information about these and related statistics, contact Tony Bammann on Adelaide 08 8237 7316, or any ABS office shown on the back cover of this publication.

NOTES

FORTHCOMING ISSUES

ISSUE (Quarter)

RELEASE DATE

December 1998

25 February 1999

March 1999

27 May 1999

.....

ABOUT THIS ISSUE

This is the first quarterly issue of preliminary estimates for the value of building work done obtained from the Building Activity Survey.

This publication has been introduced to provide an early indication of trends in building activity.

The data contained in this publication are estimates based on a response rate of approximately 85% of the value of building work done during the quarter. More comprehensive and updated results for the June and September quarters will be released in *Building Activity Australia* (Cat. no. 8752.0) on 19 January 1999.

Chain Laspeyres volume measures have been used in this publication. This is in line with the Australian Bureau of Statistics (ABS) intention to replace constant price estimates with chain volume measures. For further information see Explanatory Notes, paragraphs 15–18 or the ABS *Information Paper: Introduction of Chain Volume Measures in the Australian National Accounts* (Cat. no. 5248.0).

.....

SAMPLING ERRORS

The estimates in this publication are based on a sample survey of private sector house building activity (including alterations and additions to private sector houses), and a complete enumeration of other building activity. Because data are not collected for all private sector house building jobs, the published estimates are subject to sampling variability. Relative standard errors give a measure of this variability and therefore indicate the degree of confidence that can be attached to the data.

.....

RELATIVE STANDARD ERRORS

Relative standard errors for the value of work done in the September quarter 1998 for new houses, total residential building and total building are given below. There is 67% confidence that the actual value would be within one standard error of the sample estimate, and 95% confidence that it lies within two standard errors.

.....

%

.....

New houses	1.7
Total residential building	1.0
Non-residential building	..
Total building	0.6

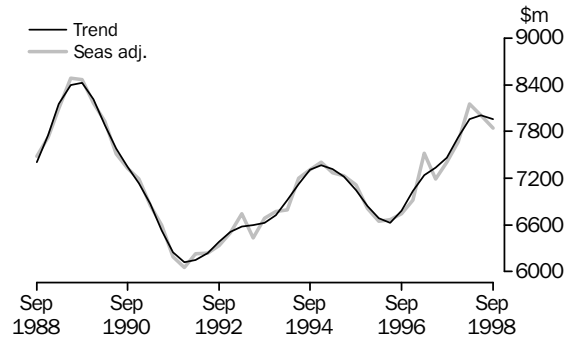
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W. McLennan
Australian Statistician

BUILDING WORK DONE: Chain volume measures(a)

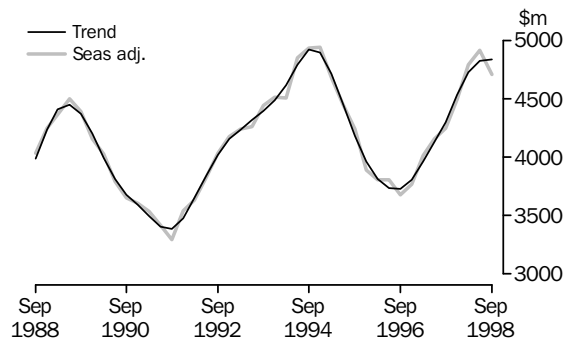
TOTAL BUILDING

The trend has levelled off after rising steadily since the June quarter 1996.



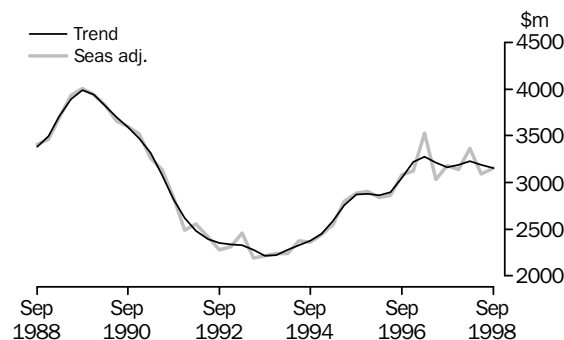
TOTAL RESIDENTIAL BUILDING

After showing strong and consistent growth since the September quarter 1996 the trend has slowed significantly. The September quarter 1998 figure was still 12.5% higher than the level of a year ago.



NON-RESIDENTIAL BUILDING

The trend has been fluctuating, but relatively stable over the last eight quarters.



(a) Reference year 1996-97.

<i>Period</i>	<i>New houses</i>	<i>Total residential building</i>	<i>Total non-residential building</i>	<i>Total building</i>
ORIGINAL (\$m)				
1995-96	9 391.5	15 744.7	11 486.2	27 237.4
1996-97	9 288.8	15 619.3	12 754.9	28 374.2
1997-98	11 137.8	18 455.2	12 787.9	31 243.1
1997				
June	2 487.0	4 125.4	3 096.9	7 223.4
September	2 662.2	4 403.7	3 302.3	7 705.9
December	2 889.5	4 778.6	3 349.9	8 128.5
1998				
March	2 670.3	4 394.2	2 985.5	7 379.7
June	2 915.8	4 878.7	3 150.3	8 029.0
September	2 904.7	4 877.3	3 282.2	8 159.5
SEASONALLY ADJUSTED (\$m)				
1997				
June	2 493.1	4 157.3	3 029.8	7 194.2
September	2 571.1	4 249.4	3 181.5	7 410.2
December	2 731.2	4 498.4	3 141.7	7 667.7
1998				
March	2 914.0	4 793.3	3 370.1	8 157.2
June	2 922.5	4 918.5	3 089.1	8 006.9
September	2 807.3	4 707.8	3 157.7	7 842.8
TREND ESTIMATES (\$m)				
1997				
June	2 483.9	4 129.9	3 208.9	7 335.7
September	2 602.1	4 302.4	3 165.4	7 466.8
December	2 750.5	4 532.7	3 187.4	7 726.2
1998				
March	2 855.3	4 729.0	3 226.4	7 959.1
June	2 891.8	4 827.0	3 189.9	8 011.6
September	2 877.1	4 839.6	3 152.1	7 962.6

(a) Reference year for chain volume measures is 1996-97. See paragraphs 15-18 of the Explanatory Notes.

<i>Period</i>	<i>New houses</i>	<i>Total residential building</i>	<i>Total non-residential building</i>	<i>Total building</i>
ORIGINAL (% change from preceding period)				
1995–96	–20.2	–17.2	13.2	–6.7
1996–97	–1.1	–0.8	11.0	4.2
1997–98	19.9	18.2	0.3	10.1
1997				
June	13.4	12.1	–1.2	6.0
September	7.0	6.7	6.6	6.7
December	8.5	8.5	1.4	5.5
1998				
March	–7.6	–8.0	–10.9	–9.2
June	9.2	11.0	5.5	8.8
September	–0.4	—	4.2	1.6
SEASONALLY ADJUSTED (% change from preceding quarter)				
1997				
June	4.2	3.6	–14.0	–4.4
September	3.1	2.2	5.0	3.0
December	6.2	5.9	–1.3	3.5
1998				
March	6.7	6.6	7.3	6.4
June	0.3	2.6	–8.3	–1.8
September	–3.9	–4.3	2.2	–2.0
TREND ESTIMATES (% change from preceding quarter)				
1997				
June	4.8	4.2	–2.1	1.4
September	4.8	4.2	–1.4	1.8
December	5.7	5.4	0.7	3.5
1998				
March	3.8	4.3	1.2	3.0
June	1.3	2.1	–1.1	0.7
September	–0.5	0.3	–1.2	–0.6

(a) Reference year for chain volume measures is 1996–97. See paragraphs 15–18 of Explanatory Notes.

<i>Period</i>	<i>New houses</i>	<i>Total residential building</i>	<i>Total non-residential building</i>	<i>Total building</i>
ORIGINAL (\$m)				
1995-96	9 376.6	15 677.0	11 339.4	27 016.4
1996-97	9 288.8	15 619.3	12 754.9	28 374.2
1997-98	11 176.4	18 686.4	13 259.2	31 945.7
1997				
June	2 481.0	4 125.2	3 121.1	7 246.3
September	2 658.1	4 422.5	3 373.4	7 795.9
December	2 896.3	4 827.1	3 461.8	8 288.9
1998				
March	2 685.3	4 462.2	3 112.7	7 574.9
June	2 936.7	4 974.6	3 311.4	8 285.9
September	2 935.9	5 001.4	3 486.1	8 487.5
SEASONALLY ADJUSTED (\$m)				
1997				
June	2 492.4	4 146.7	3 066.5	7 237.2
September	2 572.2	4 288.5	3 260.9	7 513.2
December	2 742.8	4 595.1	3 255.0	7 834.0
1998				
March	2 935.9	4 827.1	3 520.8	8 387.2
June	2 948.8	4 999.1	3 252.9	8 276.5
September	2 841.7	4 884.3	3 367.4	8 175.4
TREND ESTIMATES (\$m)				
1997				
June	2 484.5	4 141.0	3 250.5	7 386.6
September	2 605.3	4 340.3	3 242.1	7 569.1
December	2 761.3	4 587.7	3 300.2	7 890.3
1998				
March	2 874.8	4 797.8	3 370.2	8 180.4
June	2 919.3	4 923.6	3 363.7	8 287.9
September	2 912.5	4 983.1	3 348.3	8 295.7

<i>Period</i>	<i>New houses</i>	<i>Total residential building</i>	<i>Total non-residential building</i>	<i>Total building</i>
ORIGINAL (% change from preceding period)				
1995-96	-18.8	-15.5	16.4	-4.6
1996-97	-0.9	-0.4	12.5	5.0
1997-98	20.3	19.6	4.0	12.6
1997				
June	13.1	12.1	-0.4	6.3
September	7.1	7.2	8.1	7.6
December	9.0	9.1	2.6	6.3
1998				
March	-7.3	-7.6	-10.1	-8.6
June	9.4	11.5	6.4	9.4
September	—	0.5	5.3	2.4
SEASONALLY ADJUSTED (% change from preceding quarter)				
1997				
June	4.0	3.3	-13.4	-4.1
September	3.2	3.4	6.3	3.8
December	6.6	7.1	-0.2	4.3
1998				
March	7.0	5.0	8.2	7.1
June	0.4	3.6	-7.6	-1.3
September	-3.6	-2.3	3.5	-1.2
TREND ESTIMATES (% change from preceding quarter)				
1997				
June	4.7	4.5	-1.3	1.8
September	4.9	4.8	-0.3	2.5
December	6.0	5.7	1.8	4.2
1998				
March	4.1	4.6	2.1	3.7
June	1.5	2.6	-0.2	1.3
September	-0.2	1.2	-0.5	0.1

EXPLANATORY NOTES

INTRODUCTION

1 This publication contains preliminary estimates from the quarterly Building Activity Survey of the value of building work done during the quarter. The data contained in this publication are early estimates based on a response rate of approximately 85% of the value of building work done during the quarter. More comprehensive and updated results for the last two quarters will be available shortly in *Building Activity, Australia* (Cat. no. 8752.0).

2 The statistics were compiled on the basis of returns collected from builders and other individuals and organisations engaged in building activity. The quarterly survey consists of two components:

- a sample survey of private sector jobs involving new house construction or alterations and additions valued at \$10,000 or more to houses
- a complete enumeration of jobs involving construction of new residential buildings other than private sector houses, all alterations and additions to residential buildings (other than private sector houses) with an approval value of \$10,000 or more, and all non-residential building jobs with an approval value of \$50,000 or more.

SCOPE AND COVERAGE

3 The statistics relate to *building* activity which includes construction of new buildings and alterations and additions to existing buildings. Construction activity not defined as building (e.g. construction of roads, bridges, railways, earthworks, etc.) is excluded.

RELATIONSHIP WITH NATIONAL ACCOUNTS

4 Data on the value of work done on the construction of new residential buildings, alterations and additions to residential buildings, private sector non-residential buildings (from the Building Activity Survey) and the value of engineering construction activity (from Cat. no. 8762.0) are the major source data which are used to compile the national accounts estimates for private gross fixed capital formation on dwellings, and other buildings and structures. However, there are some adjustments to the survey data which are made in the process of compiling these national accounts series. Allowances are made for the value of building activity which is out of scope of the Building Activity Survey and the Engineering Construction Activity Survey. Such activity includes work done on projects which fall below the size cut-offs used for the surveys and also the value of work done which is undertaken without obtaining a building permit, either because such a permit is not required or because the requisite permit is not obtained. The national accounts estimates also make allowances for purchases (less sales) of buildings and other structures from (to) the public sector.

DEFINITIONS

5 A *building* is defined as a rigid, fixed and permanent structure which has a roof. Its intended purpose is primarily to house people, plant, machinery, vehicles, goods or livestock. An integral feature of a building's design, to satisfy its intended use, is the provision for regular access by persons.

6 A *dwelling unit* is defined as a self-contained suite of rooms, including cooking and bathing facilities and intended for long-term residential use. Units (whether self-contained or not) within buildings offering institutional care, such as hospitals, or temporary accommodation such as motels, hostels and holiday apartments, are not defined as dwelling units. The value of units of this type is included in non-residential building.

EXPLANATORY NOTES *continued*

DEFINITIONS *continued*

7 A *residential building* is defined as a building predominantly consisting of one or more dwelling units. Residential buildings can be either *houses* or *other residential buildings*:

- A *house* is defined as a detached building predominantly used for long-term residential purposes and consisting of only one dwelling unit. Thus, detached 'granny flats' and detached dwelling units (such as caretakers' residences) associated with non-residential buildings are defined as houses for the purpose of these statistics.
- An *other residential building* is defined as a building which is predominantly used for long-term residential purposes and which contains (or has attached to it) more than one dwelling unit (e.g. includes townhouses, duplexes, blocks of flats, apartment buildings, etc.).

8 The *value of building work done during the period* represents the estimated value of building work actually carried out during the quarter on jobs which have commenced.

SEASONAL ADJUSTMENT

9 Seasonally adjusted building statistics are shown in tables 1–4. In the seasonally adjusted series, account has been taken of normal seasonal factors and the effect of movement in the date of Easter which may, in successive years, affect figures for different quarters. Details regarding the methods used in seasonally adjusting the series are available on request.

10 Since seasonally adjusted statistics reflect both irregular and trend movements, an upward or downward movement in a seasonally adjusted series does not necessarily indicate a change of trend. Particular care should therefore be taken in interpreting individual quarter-to-quarter movements. Each of the component series shown has been seasonally adjusted independently. As a consequence, while the unadjusted components in the original series shown add to the totals, the adjusted components may not add to the adjusted totals.

11 As happens with all seasonally adjusted series, the seasonal factors are reviewed annually to take account of each additional year's data. For the Building Activity Survey, the results of the latest review are shown in the December quarter issue each year.

TREND ESTIMATES

12 Seasonally adjusted series can be smoothed to reduce the impact of the irregular component in the adjusted series. This smoothed seasonally adjusted series is called a trend estimate.

13 The trend estimates are derived by applying a 7-term Henderson moving average to the seasonally adjusted series. The 7-term Henderson average (like all Henderson averages) is symmetric but, as the end of a time series is approached, asymmetric forms of the average are applied. Unlike weights of the standard 7-term Henderson moving average, the weights employed here have been tailored to suit the particular characteristics of individual series.

EXPLANATORY NOTES *continued*

TREND ESTIMATES *continued*

14 While the smoothing technique described in paragraphs 11 and 12 enables trend estimates to be produced for recent quarters, it does result in revisions to the estimates for the most recent three quarters as additional observations become available. There may also be revisions because of changes in the original data and as a result of the re-estimation of the seasonal factors. For further information, see *Information Paper: A Guide to Interpreting Time Series — Monitoring Trends: an Overview* (Cat. no. 1348.0) or contact the Assistant Director, Time Series Analysis on Canberra 02 6252 6345.

CHAIN VOLUME MEASURES

15 Chain volume estimates of the value of work done are presented in original, seasonally adjusted and trend terms.

16 While current price estimates of value of work done reflect both price and volume changes, chain volume estimates measure changes in value after the direct effects of price changes have been eliminated and therefore only reflect volume changes. The deflators used to revalue the current price estimates in this publication are derived from the same price data underlying the deflators compiled for the dwellings and non-dwelling construction components of the national accounts aggregate 'Gross fixed capital formation'.

17 The chain volume measures of building work done appearing in this publication are annually reweighted chain Laspeyres indexes referenced to current price values in a chosen reference year (currently 1996–97). The reference year will be updated annually in the June quarter publication. Each year's data in the value of building work done series are based on the prices of the previous year, except for the quarters of the latest incomplete year (i.e. for the 1998–99 financial year) which are based upon the current reference year (i.e. 1996–97). Comparability with previous years is achieved by linking (or chaining) the series together to form a continuous time series. Further information on the nature and concepts of chain volume measures is contained in the ABS *Information Paper: Introduction of Chain Volume Measures in the Australian National Accounts* (Cat. no. 5248.0).

18 The factors used to seasonally adjust the chain volume series are identical to those used to adjust the corresponding current price series.

ACKNOWLEDGMENT

19 ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated: without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the *Census and Statistics Act 1905*.

UNPUBLISHED DATA

20 The ABS can also make available certain building approvals and activity data which are not published. Where the data cannot be provided by telephone, it can be provided via fax, photocopy, computer print-out, floppy disk and email. A charge may be made for providing unpublished information in these forms.

EXPLANATORY NOTES *continued*

RELATED PUBLICATIONS

21 Users may also wish to refer to the following publications which are available on request:

- Building Activity, Australia: Dwelling Unit Commencements, Preliminary* (Cat. no. 8750.0) — issued quarterly
- Building Activity, Australia* (Cat. no. 8752.0) — issued quarterly
- Building Approvals, Australia* (Cat. no. 8731.0) — issued monthly
- Construction Industry Australia, Summary of Private Sector Operations, 1988–89* (Cat. no. 8771.0)
- Engineering Construction Activity, Australia* (Cat. no. 8762.0) — issued quarterly
- House Price Indexes: Eight Capital Cities* (Cat. no. 6416.0) — issued quarterly
- Housing Finance for Owner Occupation, Australia* (Cat. no. 5609.0) — issued monthly
- Price Index of Materials Used in Building Other Than House Building, Six State Capital Cities* (Cat. no. 6407.0) — issued quarterly
- Price Index of Materials Used in House Building, Six State Capital Cities* (Cat. no. 6408.0) — issued quarterly
- Public Sector Construction Activity, Australia, 1988–89* (Cat. no. 8775.0)

22 Current publications produced by the ABS are listed in the *Catalogue of Publications and Products* (Cat. no. 1101.0). The ABS also issues, on Tuesdays and Fridays, a *Release Advice* (Cat. no. 1105.0) which lists publications to be released in the next few days. The Catalogue and Release Advice are available from any ABS office.

SYMBOLS AND OTHER USAGES

ABS	Australian Bureau of Statistics
..	not applicable
—	nil or rounded to zero

Where figures have been rounded, discrepancies may occur between sums of the component items and totals.

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