



Australian Government

Department of Infrastructure and Regional Development

Bureau of Infrastructure, Transport and Regional Economics



BITRE Road Construction and Maintenance Price Index—2015 update

At a glance

The BITRE Road Construction and Maintenance Price Index (RCMPI) decreased by 1.56 index points between 2013–14 and 2014–15 (Table 1).

The largest contributor to this change was falling prices for ‘bituminous materials’ and ‘diesel fuel’. The fall in prices of ‘other materials (steel)’, ‘equipment hire/depreciation’ and ‘office-based labour’ contribute to the remainder of the index decline.

These were counterbalanced, to a limited extent, by increase in prices of ‘site-based labour’, ‘quarry products’ and ‘cement and concrete’ over the same period.

1. Key Results

The cost of road construction and maintenance has decreased by 1.56 index points between 2013–14 and 2014–15. The most significant contributor to the index decline was falling prices for ‘bituminous materials’ and ‘diesel fuel’. They were counterbalanced, to a limited extent, by increase in ‘site-based labour’, ‘quarry products’ and ‘cement and concrete’ over the same period (Figure 1).

Figure 2 shows that between 2013–14 and 2014–15, the costs for road works decreased across all types of roads and all types of road work activities. On a financial year basis, construction and maintenance of arterial roads and sealed local roads had the largest cost decrease of the road types reported, with unsealed local roads costs falling at a subdued rate. Road maintenance had the largest cost decrease in road work activities. The RCMPI and its sub-indexes are also compared with the ABS Producer Price Index (PPI) for Road and Bridge Construction, which increased by 0.75 index points over the same period.

Table 1 shows the time series data of the RCMPI. Sub-indexes by activity and road type are provided in Table 2.

Figure 1: Contributions by inputs to the change in the BITRE RCMPI 2015 update (2015 data, 2013 input per cent shares) between 2013–14 to 2014–15

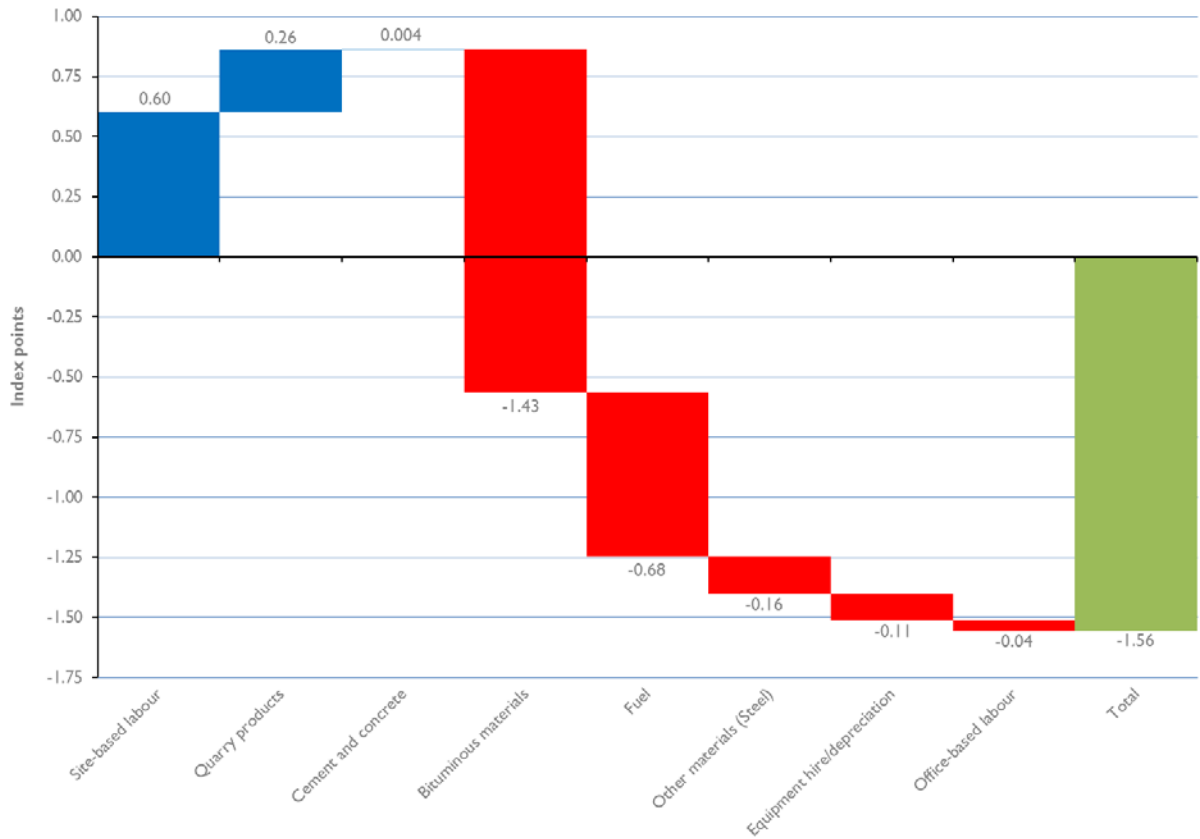


Figure 2: Changes in the ABS Road and Bridge Construction PPI, the RCMPI and its sub-indexes, 2013–14 to 2014–15

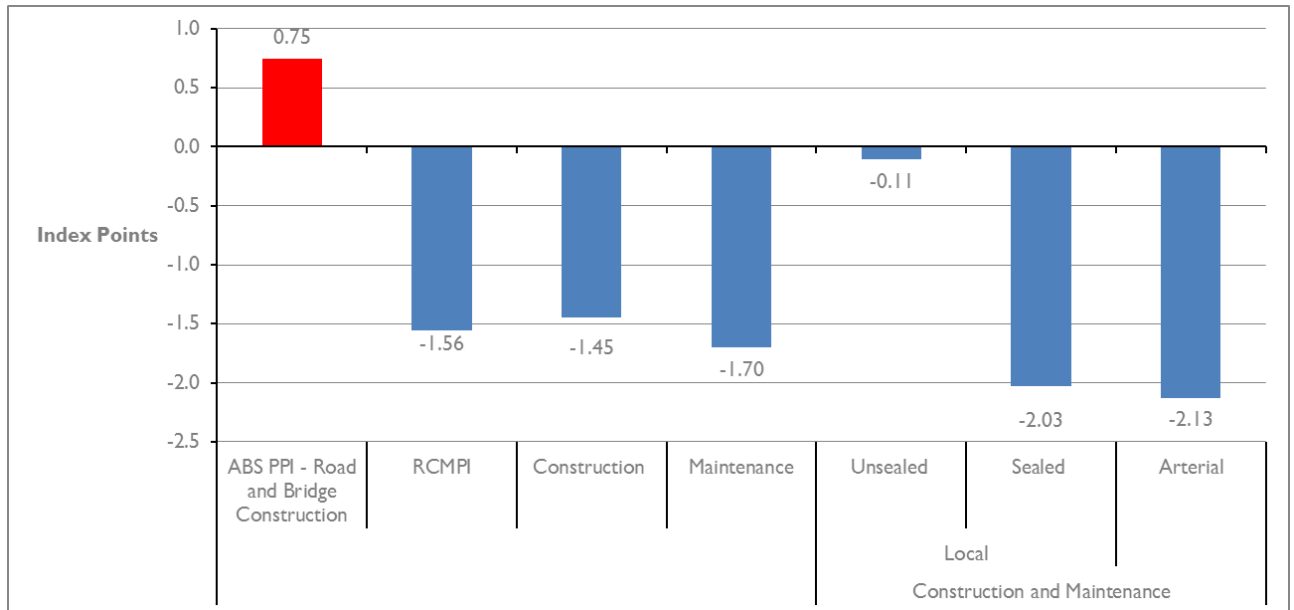


Table I: BITRE Road Construction and Maintenance Price Index 2015 updates:
2015 input prices, 2013 input per cent shares (Quarterly, 2011–12=100)

Year	Quarter	RCMPI	RCMPI (Financial year basis)
2006	March	79.24	
	June	80.41	79.30
	September	81.01	
	December	81.10	
2007	March	82.17	
	June	82.98	81.81
	September	84.59	
	December	85.93	
2008	March	86.64	
	June	89.32	86.62
	September	92.91	
	December	94.41	
2009	March	93.50	
	June	92.61	93.36
	September	92.27	
	December	92.40	
2010	March	92.20	
	June	93.12	92.50
	September	93.73	
	December	94.25	
2011	March	95.15	
	June	97.81	95.23
	September	99.02	
	December	99.84	
2012	March	99.84	
	June	101.30	100.00
	September	101.06	
	December	101.62	
2013	March	101.62	
	June	101.37	101.42
	September	102.07	
	December	102.42	
2014	March	102.45	
	June	102.06	102.25
	September	101.91	
	December	102.39	
2015	March	100.38	
	June	98.08	100.69

Notes: Using 2011-12 as the Index reference period means that the average of the indexes for September quarter 2011, December quarter 2011, March quarter 2012 and June quarter 2012 is 100.

Source: BITRE estimates (2015).

Table 2: BITRE Road Construction and Maintenance Price Sub-Indexes 2015 updates: 2015 input prices, 2013 input per cent shares (Quarterly, 2011–12=100)

Year	Quarter	Road Construction	Road Maintenance	Arterial	Sealed Local	Unsealed Local
2006	March	79.22	79.15	78.81	79.40	79.76
	June	80.37	80.34	80.03	80.62	80.79
	September	80.99	80.93	80.63	81.14	81.53
	December	81.05	81.06	80.75	81.23	81.48
2007	March	82.10	82.12	81.75	82.26	82.67
	June	82.99	82.85	82.44	82.97	83.85
	September	84.53	84.55	84.18	84.59	85.27
	December	85.93	85.84	85.49	85.86	86.81
2008	March	86.62	86.58	86.26	86.60	87.40
	June	89.56	89.00	88.83	89.32	90.35
	September	93.77	91.99	92.44	93.07	93.87
	December	95.80	92.99	93.88	94.68	95.33
2009	March	94.86	92.10	92.94	93.72	94.35
	June	93.69	91.50	92.08	92.69	93.53
	September	92.96	91.54	91.78	92.21	93.22
	December	92.96	91.80	91.93	92.29	93.34
2010	March	92.59	91.76	91.69	91.94	93.35
	June	93.49	92.71	92.69	92.99	94.00
	September	93.95	93.45	93.30	93.56	94.59
	December	94.37	94.07	93.80	94.03	95.20
2011	March	95.28	94.95	94.57	94.79	96.52
	June	97.99	97.59	97.44	97.65	98.67
	September	99.11	98.93	98.98	99.01	99.15
	December	99.93	99.74	99.71	99.73	100.23
2012	March	99.76	99.92	99.90	99.88	99.66
	June	101.20	101.41	101.42	101.38	100.96
	September	101.00	101.15	101.27	101.14	100.57
	December	101.55	101.72	101.79	101.66	101.23
2013	March	101.52	101.75	101.80	101.64	101.22
	June	101.21	101.58	101.62	101.40	100.84
	September	101.69	102.50	102.55	102.23	100.94
	December	102.06	102.85	102.96	102.60	101.19
2014	March	102.18	102.77	102.74	102.42	101.93
	June	101.99	102.14	101.80	101.63	102.99
	September	101.68	102.19	101.91	101.60	102.21
	December	102.09	102.75	102.54	102.22	102.19
2015	March	100.20	100.59	100.16	99.94	101.04
	June	98.18	97.93	96.92	96.99	101.18

Notes: Using 2011-12 as the Index reference period means that the average of the indexes for September quarter 2011, December quarter 2011, March quarter 2012 and June quarter 2012 is 100.

Source: BITRE estimates (2015).

2. Explanatory notes

The RCMPI is an input-price index. It is used to measure the rate of change in the prices of goods and services, which are purchased by suppliers of road construction and maintenance services. It is intended to reflect trends in prices of major input components of road construction and maintenance.

The contribution of each input to the overall cost of road construction and maintenance work is determined by two factors: the unit price of the input and the input's per cent share in the total cost of road works.

The RCMPI is updated each quarter to reflect shifts in the price of inputs. The updates relied on quarterly data compiled by the Australian Bureau of Statistics (ABS) on input price changes and the Australian Institute of Petroleum on prices of diesel fuel.

Previously, the cost of bituminous materials was measured using the ABS (2015a) Producer Price Indexes series ID 2314822F, which is no longer published. As a result price data for this input are now derived from the International Cargo Statistics database (ABS 2015c). We extract the unit price for bulk bitumen using a K-means cluster analysis of shipments having Standard International Trade Classification (SITC) category 33541 ('Petroleum bitumen and other residues of petroleum oils or of oils obtained from bituminous minerals'). The weighted mean price of the cluster having the highest traded mass is used.

The updated method has characteristics closer to the older ABS series—which RCMPI still uses up to June quarter 2013—than the weighted average used in the 2014 RCMPI issue. The bituminous materials component of the Index has been updated with the new approach from September quarter 2013.

Along with BITRE there were two other contributors to literature on road price indexes in Australia. In the past state road agencies have produced road construction and maintenance price indexes (see BTCE 1997). However, none of them have publicly released their road price indexes in recent times. ABS is the other contributor to literature on road indexes (see Box 1).

Box 1: Comparing the BITRE RCMPI with the ABS Road and bridge construction output price index

From 2002, the ABS has published an output producer price index for the general construction industry in the Australian and New Zealand Standard Industrial Classification 1993 (ANZSIC93 subdivision 41). This index includes a component for 'Road and bridge construction' (ANZSIC93 subdivision 4121). Since 2005 this index has been published at both the national and state/ territory levels. The ABS index and the BITRE index are conceptually different because the 'Road and bridge' index is an output price index whereas the RCMPI is an input price index. The ABS 'Road and bridge' index takes into account the selling prices and includes changes in profit margins received by suppliers of road construction products. Despite the differences in scope between the ABS and RCMPI indexes, the two indexes diverge only slightly when compared with the RCMPI generally showing slower growth than the ABS index.

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