

# Public road-related expenditure and revenue in Australia

# At a glance

This information sheet covers road-related expenditure for the years 2000–01 to 2008–09 by level of government, as well as total expenditure by state and territory. It also provides an estimate of private sector transfers of road assets to state and local governments. Selected motor vehicle taxes and charges have been updated to 2008–09. The information sheet provides Australian Government road expenditure by program for the year 2008–09 (Table 1) and updates the BITRE's Road Construction and Maintenance Price Index to 2009–10 (Table 3).

# Public road-related expenditure

- The total amount of funding for road-related expenditure by the Australian, state, territory and local Governments in 2008–09 was \$15.8 billion (Table 1). This amount includes transfers from the private sector. Between 2000–01 and 2008–09 total road-related expenditure increased by an average of 8.57 per cent per year in nominal terms (Table 1).
- Figure 2 shows that in 2008–09, 81.3 per cent of the expenditure occurred in the three largest states (Qld, 34.4 per cent, NSW, 31.9 per cent and Victoria, 15.0 per cent).
- Australian Government road expenditure measured in constant 2008–09 prices was \$4.9 billion in 2008–09. Table 4 shows the breakdown of this expenditure by program.
- In the same year, state and territory expenditure was \$9.9 billion. Local government expenditure was \$3.4 billion. Combined with the increases in private sector contributions results in the overall road expenditure, measured in 2008–09 constant prices, increasing from \$14.4 billion in 2007–08 to \$15.8 billion in 2008–09 (Table 2).

# Road construction and maintenance price index (RCMPI)

- Overall the road construction and maintenance price index is estimated to have risen by 2.1 per cent from 2007–08 to 2008–09.
- Decomposing this result shows that on average the inputs used in road construction and maintenance were impacted up as follows:
  - Cost of diesel changed by –5.3 percent;
  - The cost of plant hire and depreciation changed by -0.1

However these decreases in input prices were counterbalanced by the following input cost increases:

- Salaried and other labour costs rose by +2.6 per cent;
- Cost of sand rose by +2.2 per cent;
- Cost of asphalt rose by +1.4 per cent;
- Cost of concrete rose by +0.5 per cent; and
- Cost of other inputs rose by 0.8 per cent.

• The RCMPI is an input price index and measures price changes in the inputs used in road construction and maintenance in Australia. It does not measure changes in the prices at which road construction and maintenance products are sold. In contrast, the ABS road and bridge construction index does take into account the selling prices and includes changes in profit margins by suppliers of road construction products. The differences in the scope of the two indexes need to be taken into account when comparing the two indexes (Figure 1).

## Public road-related revenue

- Of the \$15.6 billion collected in 2008–09 from selected taxes and charges, \$8.7 billion was petroleum products excise (Table 6).
- State and territory governments raised \$3.4 billion from vehicle registration and licence fees.
- Stamp duty collected on vehicle registration fees raised \$2.0 billion.
- Fringe Benefit Tax (FBT) paid on motor vehicles added an extra \$1.7 billion. The amount of GST (on motor vehicles purchase, maintenance and use including fuel consumption) is not yet available but was \$4.0 billion in 2004–05. FBT and GST are not included in the total because no data are available on them for most years.

Joint presentation of the government road-related expenditures with motor vehicle revenues in this information sheet does not imply that there is any direct linkage between revenue and expenditure.

# Statistical tables

#### ΤĪ Funding of road-related expenditure (current prices)

Source of funding	2000-01	2001-02	2002–03	2003-04	2004–05	2005–06	2006–07	2007–08	2008–09
					(\$ millions)				
Australian Governme nt	I 458.5	1 821.5	I 720.I	1818.2	2 101.3	4 251.7	2 772,1	2 723.8	4 944.7
State government	3 713.7	3 319.5	3 575.5	3 471.3	4 269.6	2 533.0	5 430.0	7 431.1	6 636.6
Local government	2 851.8	2 852.1	2 725.5	2 805.5	2 637.9	2 306.0	2 489.0	3 145.3	3 356.7
Private sector	159.0	177.0	413.0	361.0	509.0	628.0	822.0	877.0	859.0
Total	8 183.0	8 170.1	8 434.0	8 456.0	9 517.7	9 718.7	11 513.1	14 177.2	15 797.0

For more details see Explanatory notes at the end of the publication. Notes:

Components may not add to sums due to rounding

- 2 The table reports road construction and maintenance costs but includes some administration and planning costs associated with those activities. Where identifiable, expenditure not directly associated with road construction and maintenance is not included.
- 3 Figures for the years 200-01 to 2007-08 differ from those in BITRE Information sheet 37 partly because ABS has revised previously reported data because states/ territories have revised the raw input data they provide to ABS.
- The figures for each level of government show all the expenditure from own sources at that level. Thus state expenditure on local roads is recorded under state expenditure.
- Private sector expenditure is the total value of assets transferred to state and local government from private sector sources. Almost all transfers are to local government.

ABS (2010b), DOIT (2010). Sources:

#### T2 Funding of road-related expenditure (constant 2008–09 prices)

Source of funding	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
				(	(\$ millions)				
Australian Government	2 049.5	2 474.8	2 238.3	2 233.4	2 463.6	4 785.5	3 009.4	2 763.8	4 944.7
State government	5 218.7	4 5 1 0.0	4 652.6	4 264.0	5 005.7	2 851.1	5 894.9	7 540.1	6 636.6
Local government	4 007.5	3 875.0	3 546.6	3 446.2	3 092.6	2 595.5	2 702.0	3 191.5	3 356.7
Private sector	223.4	240.5	537.4	443.4	596.8	706.8	892.4	889.9	859.0
Total	11 499.2	11 100.3	10 974.9	10 387.0	11 158.6	10 938.9	12 498.7	14 385.2	15 797.0

Notes: For more details see Explanatory notes at the end of the publication.

Components may not add to sums due to rounding.

The figures in constant 2008-09 prices reported in this table have been derived from Table I and the BITRE index in Table 3.

ABS (2010b), DOIT (2010), BITRE estimates. Sources:

**T3** BITRE road construction and maintenance input price index, RCMPI, (1998-99 = 100) and the ABS road and bridge construction output price index (1998–99 = 100)

Year	RCMPI	ABS Road and bridge construction index		
1992–93	89.9			
1993–94	93.0			
1994–95	94.8			
1995–96	96.4			
1996–97	97.4			
1997–98	98.7	98.7		
1998–99	0.001	100.0		
1999–00	102.3	103.7		
2000-01	105.3	107.9		
2001-02	108.9	109.7		
2002–03	113.7	116.0		
2003–04	120.5	120.8		
2004–05	126.2	125.8		
2005–06	131.5	133.2		
2006–07	136.3	139.9		
2007–08	145.8	147.5		
2008–09	148.0	157.0		
2009-10	150.6	159.0		

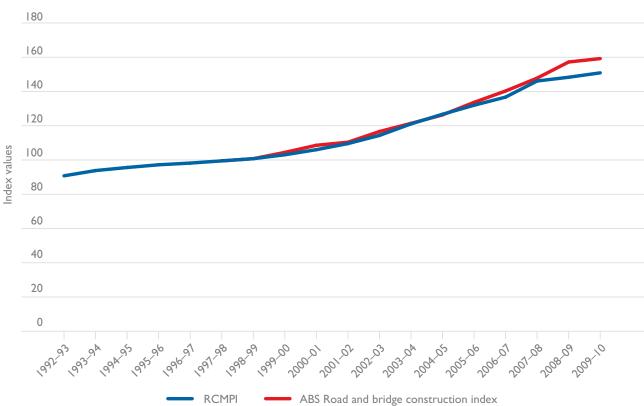
Notes: For more details see Explanatory notes at the end of the publication.

From now on the BITRE RCMPI is published with 1998-99 =100. The re-basing does not change the underlying information. The BITRE RCMPI is an input price index constructed bottom-up from the changes in prices of the inputs used in road construction. The index 2 does not include sub-contractor margins because it does not include the price of output.

The ABS index is an output price index and reflects the road/ bridge builders' selling prices, excluding GST and the value of land, but including sub-contractor margins.

Sources: BITRE estimates, ABS (2010c), BTCE (1997).

#### FI BITRE RCMPI and the ABS Road and bridge construction index: 2010 update (1998–99 = 100)



T4 Australian government road expenditure by program (current prices)

Road program	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09
		(\$ millions, current prices)							
National Highways <b>a</b>	697.3	783.9	763.4	704.3	-	_	_	-	_
Roads of National Importance (RONIs)	135.1	234.3	213.7	224.3	_	_	_	_	_
Research-Road	2.2	2.6	3.6	3.1	6.0	7.8	11.5	8.4	13.6
National Network–Road	_	_	_	_	1 246.5	1 191.7	1 541.8	I 653.8	2 775.8
Improving the National Network	_	_	_	_	_	1 820.0	_	_	_
Off–Network/Strategic Regional (Roads)	-	-	-	-	-	14.5	290.3	75.7	99.7
Black Spots	40.9	42.4	44.5	44.5	44.5	44.4	41.6	37.3	144.7
Roads to Recovery	150.0	302.2	202.2	302.2	253.1	307.5	304.4	262.5	355.0
State Financial Assistance Grants Identified for Roads b	-	-	-	-	-	-	-	-	-
Local Government Financial Assistance Grants Identified for Roads	406.5	424.8	451.4	465.5	473.4	499.2	518.2	542.7	728.7
Heavy vehicle safety									10.0
Building Australia Fund– Road and other projects	-	-	-	-	-	-	-	-	742.0
Urban Congestion & Planning	_	_	_	-	-	_	_	75.0	_
Improving Local Roads	_	_	_	_	_	307.5	-	_	_
Supplementary Funding to South Australia for Roads	-	-	-	-	4.3	9.0	13.0	13.6	14.3
Federation Fund-Murray River Bridges	_	_	_	8.5	20.5	_	_	_	1.0
Federation Fund–Caboolture Motorway, QLD	-	-	5.3	24.8	9.9	-	-	-	-
Nation Building Plan for the future— Major cities–Road projects	_	_	-	_	_	_	-	_	5.0
Victoria–Whitehorse Road & Springvale Rd Intersection Upgrade	_	_	_	_	_	_	_	0.6	0.2
Federal interstate registration scheme (FIRS)	26.6	31.3	36.0	41.1	43.2	50.0	51.3	54.2	54.6
TOTAL-ROAD	1 458.5	1 821.5	I 720.I	1818.2	2 101.3	4 251.7	2 772.1	2 723.8	4 944.7

Notes: For more details see Explanatory notes at the end of the publication.

Stands for nil,

a Funding provided for bridge surveys during 1997–99 (\$3.613m) and 1998–99 (\$6.5217) has been included under the National Highway category.

b From 2000–01 State Financial Assistance Grants identified for Roads have been subsumed in Goods and Service Tax payments to states/territories.

Source: DOIT (2010).

Total road-related expenditure by state/ territory (current prices)

Road program	2000-01	2001-02	2002-03	2003-04	2004–05	2005–06	2006–07	2007–08	2008–09
				(\$ millio	ns, current price:	s)			
NSW	2 646.0	2 718.8	2 779.4	2 831.9	3 476.8	3 172.4	3 919.0	4 313.7	5 043.4
VIC	1 326.0	1 405.0	I 663.4	1 262.6	I 637.8	1 577.9	1 820.8	2 163.1	2 376.4
QLD	2 353.8	2 037.0	2 000.5	2 448.2	2 222.7	2 580.6	3 360.3	4 466.0	5 429.8
SA	475.1	489.6	485.8	482.7	478.6	644.4	437.9	682.6	494.1
WA	1 085.0	1 177.9	1 200.1	1 176.1	1 394.7	1 208.0	1 486.5	2 001.7	1 935.3
TAS	157.5	187.5	167.1	114.3	172.9	230.6	163.6	197.2	189.1
NT	82.0	80.0	72.0	77.0	78.0	222.0	230.0	228.0	282.7
ACT	55.0	71.0	67.0	62.0	59.0	76.0	90.0	118.0	35.7
Subtotal	8 180.3	8 166.8	8 435.4	8 454.8	9 520.6	9 711.8	11 508.0	14 170.5	15 786.6
Other	2.7	3.3	3.8	3.3	4.0	8.2	8.0	7.1	5.8
Total	8 183.0	8 170.1	8 439.1	8 458.1	9 524.6	9 720.0	11 515.9	14 177.6	15 792.4

Notes: For more details see Explanatory notes at the end of the publication.

The table reports road construction and maintenance costs but includes some administration, regulation and planning costs associated with those activities. Where identifiable, expenditure not directly associated with road construction and maintenance is not included.

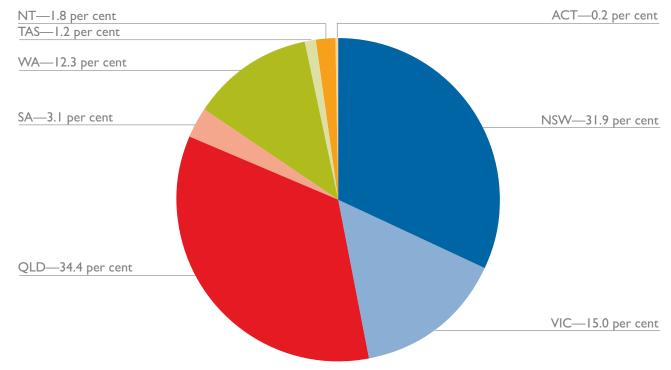
2 Figures for the years 2000–01 to 2007–08 differ from those in BITRE Information sheet 37 partly because ABS has revised previously reported data because states/territories have revised the raw input data to ABS.

3 Other expenditure consists of Australian Government monies spent directly on transport research.

Figures include private sector expenditure—the total value of assets transferred to state and local government from private sector sources.

ABS (2010b), DOIT (2010).

# F2 Proportions of total state and territory expenditure on roads



Total in 2008-09 = \$15.8 billion

Source: Computed from Table 5.

### T6 Selected motor vehicle charges and taxes (current prices)

Item	2000-01	2001-02	2002-03	2003-04	2004–05	2005–06	2006–07	2007–08	2008–09
(\$ millions, cu									
Australian government									
Petroleum products excise a	8 8 1 6 . 8	9 103.7	9 337.3	9 590.1	9 804.9	9 586.2	9 073.5	9 260.5	8 686.2
Federal Interstate Registration Scheme	26.6	31.3	35.9	41.1	43.2	50.0	51.3	54.0	55.0
Sub-total	8 843.4	9 135.0	9 373.2	9 631.2	9 848.1	9 636.2	9 175.3	9 314.5	8 741.2
State and Territory governments									
Vehicle registration fees	2 646.0	2 787.0	2 993.0	3 243.0	3 497.0	3 647.0	3 911.0	2 846.6	3 051.5
Stamp duty—vehicle registration	1 387.0	1 504.0	1 700.0	1 886.0	1918.0	1 922,0	2 004.0	2 207.0	2 026.0
Driver's licence fees <b>b</b>	253.4	239.1	235.7	262.7	313.7	311.9	211.4	249.2	305.3
Fuel franchise taxes/fees c	174.0	na							
Sub-total	4 460.4	4 530.1	4 928.7	5 391.7	5 728.7	5 880.9	6 126.4	5 302.8	5 382.8
Tolls d	471.5	603.4	664.3	731.3	778.2	931.4	1131.3	1974.4	1462.0
GST e	na	2 655.0	3 390.0	3 608.0	4 022.0	na	na	na	na
FBT <b>f</b>	na	na	na	1 750.6	I 795.7	1 828.6	I 776.I	1 771.7	1 699.8
TOTAL REVENUE (GST and FBT not included)	13 775.3	14 268.6	14 966.1	15 754.2	16 355.0	16 448.5	16 433.1	16 591.7	15 585.9

Notes: For more details see Explanatory notes at the end of the publication.

This table excludes some taxes/fees on motor vehicles such as stamp duty and customs duty.

'na' stands for not available.

The Federal Interstate Registration Scheme (FIRS) payments to states for road maintenance come entirely from the revenue collected from registration charges for vehicles registered under FIRS.

- From 1 July 2000 to 30 June 2003, excise data are net of the Diesel and Alternative Fuels Grants Scheme and Fuel Sales Grants Scheme rebates. From 1 July 2003 to 30 June 2006 excise figures are net of the Energy Grants Scheme (EGS). From 1 July 2006 excise figures are net of the Fuel Tax Credits scheme.
- b The data on vehicle registration fees and drivers' licence revenue data have been provided by state/ territory road traffic authorities.
- This tax ceased with introduction of GST in July 2000.
- d Estimates of tolls collected from public and private tollways in Australia. There is a break in the series after 1997–98 with the inclusion of estimates of all tollways open in that year:
- e This is a revised estimate of GST on motor vehicles purchase, maintenance and use including fuel consumption. It is based on available ABS figures. The GST was payable from 1 July 2000, however figures on motor vehicles are not available for that year.
- The FBT on motor vehicles consists of tax calculated using the statutory formula and using the operating method.

Source: ABS (2010a); ASX (2009); ATO (2010); Commonwealth of Australia (2010); DOIT (2010); Transport QLD (2009); RTA, NSW (2009).

# Explanatory notes

Ownership and control of the road system lies with state, territory and local governments. However, road expenditure in Australia is financed by Federal, as well as state, territory and local governments, and includes contributions and transfers from the private sector. Contributions and transfers are of roads constructed by the private sector and transferred mainly to local government ownership. An example of this is roads in housing developments.

Table I based on ABS (2010b), summarises the expenditure on roads by each level of government net of transfers of funds from higher levels of government. Total expenditure, including transfers from the private sector, is an estimate of the total expenditure on roads.

Table I indicates the financial effort made by each level of government in Australia to provide road infrastructure. The table provides estimates of the expenditure on road construction and maintenance only. However, this inevitably includes some expenditure on administration, regulation and subsidies. The estimates in this information sheet use data from the Government Financial Statistics (GFS) database of the Australian Bureau of Statistics (ABS). These data are collected from the state, territory and local government agencies which provide road construction and maintenance services for the Australian community.

# Table 2

Road-related expenditure in constant prices are derived from Table I using the BITRE Road Construction and Maintenance price index (Table 3).

# Table 3

BITRE road construction and maintenance input price index is based on changes in eight inputs to road construction and maintenance. The update of the index takes into account the changes over time in the cost of:

- fuel (diesel) where data is obtained from the Australian Petroleum Institute;
- salaried and other labour which is approximated by Average Weekly Earnings (AWE) in all industries by adult males in full time employment reported by ABS;
- bitumen—from the ABS producer price index (PPI) for asphalt supplied and placed;
- concrete—approximated by the ABS producer price index (PPI) for concrete;
- quarry products (gravel and sands)—from the ABS producer price index for sands;
- plant hire or lease—from ABS Producer Price Index for Plant Hire or Leasing (ANZSIC 774);
- other materials—from the ABS All Groups Producer Price Index.

The weights used in the index are from BTCE (1997).

A recent review of literature (see table below) compared the weights of inputs in the RCMPI with weights of these inputs reported.

Weights	used in RCMPI compared to	weights of inputs from a	literature review	
Input	Weights in RCMPI	٧	Veight in other literature Source	
		ABS (2004)	IBEF (2009)	Kersey (2007)
Fuel	6.8	3.7	ne	ne
Plant hire or lease	19.6	1.1	22.0	ne
Salaried and other labour	25.8	21.0	ne	20 to 30
Bitumen/asphalt	12.0		ne	ne
Concrete	9.7	36.8	ne	ne
Quarry products (gravel and sands)	ر 15.3	J	ne	ne
Other materials	10.8	11.1	ne	ne
Contractors/sub-contractors	0	26.3	ne	ne
Total	100.0	100.0	ne	ne

Note: In ABS (2004) the category 'contractor'sub-contractor' is a composite element which includes labour, plant hire or lease, and the other inputs.

## Table 4

The table provides details by road program funded by the Australian Government. Over the recent past the programs have included the following

National Highways—Up to 2003–04 the National Highway system was Australia's federally funded highway system, connecting all the state capitals (including Hobart). From June 2005 to 2007–08 the National Highway system was replaced by the Auslink funding program which in turn has been replaced by 'Improving the National Network' program.

Roads of National Importance (RONIs)— are roads outside the National Highway system which were funded from 1996–97 by the Commonwealth jointly with the States and Territories usually on a 50:50 basis. The criteria for considering nomination of a road as a Road of National Importance include its contribution towards trade, international competitiveness and integration of transport and land use, and whether it will generate large net social benefits. Roads of National Importance are determined on a case by case basis and are not a defined network of roads. All proposals are subject to benefit-cost analysis (Webb, 2004).

<u>Research</u>—A land transport research entity is an eligible funding recipient whose functions include carrying out, arranging or assisting planning, research, investigations, studies or analysis of matters related to land transport operations

National Network—The National Land Transport Network is a single integrated network of land transport linkages of strategic national importance, which is funded by Federal, State and Territory Governments. The National Network is based on national and inter-regional transport corridors including connections through urban areas, links to ports and airports, rail, road and intermodal connections that together are of critical importance to national and regional economic growth development and connectivity.

Off-Network/Strategic Regional (Roads)—The Australian Government's Nation Building Program also provides funds to State, Territory and local governments for road, rail and intermodal projects not situated on the National Network.

<u>Black Spots</u>—program started in December 1989 in order to implement a package of uniform road safety measures across all States and Territories. The criterion for providing funds is that a site has 'contributed to serious motor vehicle crashes involving death or personal injury'.

Roads to Recovery—program has operated since the Roads to Recovery Act became law on 21 December 2000. The program funds local roads regional roads. The Commonwealth pays Roads to Recovery grants directly to local governments.

<u>State Financial Assistance Grants Identified for Roads</u>—From 2000–01 State Financial Assistance Grants Identified for Roads have been subsumed in GST payments.

<u>Local Government Financial Assistance Grants Identified for Roads</u>—The Australian Government provides financial assistance to councils with the grants paid through the States and have two components: general purpose grants and identified local road grants. This item only includes roads grants.

<u>Heavy vehicle safety</u>— program is used by the Australian Government to deliver improved safety and productivity outcomes for the heavy vehicle industry and other road users through the provision of \$70 million towards heavy vehicle safety and productivity projects over four years from 2008–09 to 2011–12.

<u>Building Australia Fund—Road and other projects</u>—The Nation-building Funds Act 2008 was enacted on 18 December 2008. It established the Building Australia Fund to fund critical infrastructure in the transport, communications, water and energy sectors of the economy. In Table 4 this items relates to road projects only.

<u>Urban Congestion & Planning</u>—was a once-off payment in 2007–08 to fund major studies tackling urban congestion and enhance urban planning in New South Wales (\$25m), Victoria (\$21m), Queensland (\$23m), South Australia (\$3m) and Western Australia (\$3m).

Federation Fund—projects were funded from the Commonwealth Government's Centenary of Federation Fund.

<u>Federal interstate registration scheme (FIRS)</u>—FIRS commenced in 1987 as an alternative to state based registration for heavy vehicles weighing more than 4.5 tonnes and engaged solely in interstate operations. FIRS was designed to provide uniform charges and operating conditions for heavy vehicles engaged solely in interstate operations. State and Territory road transport authorities administer FIRS on behalf of the Australian Government. Operators wishing to register vehicles under FIRS apply to do so at the registration authority in their jurisdiction of residence.

# Table 5

This table shows the road-related expenditure on roads in split by state and territory and is in each case the total amount spent in the state or territory on roads. This consists of expenditure of funds from four sources: Australian Government, state governments, local governments and private sector sources.

# Table 6

The table shows that the revenue collected by the Australian, state and territory governments from a selection of motor vehicle taxes and charges.

<u>Petroleum products excise</u>—on petroleum products used in road vehicles. The statistics are reported in Australian Taxation Office's publication on Taxation statistics.

<u>Vehicle registration Driver licence fees</u>—data on these items is provided by the road and traffic authorities of the respective states/ territories.

Stamp duty on vehicle registration—Data on these items is ABS (2010a).

Toll road revenue—collected from users of toll roads during the period under review.

<u>Goods and Services Tax (GST)</u>—GST paid on motor vehicle purchases, maintenance and use, including fuel consumption.

<u>Fringe Benefits Tax</u>—revenue from the fringe benefits on motor vehicles. Fringe benefits are benefits provided in respect of employment. They are provided in addition to or in place of a part of salary or wages. These benefits are varied and can include the purchase for private use of a motor vehicle. A car fringe benefit most commonly arises where the employer makes a car owned or leased by a company available for the private use of an employee. A fringe benefits tax (FBT) is the tax paid by employers on fringe benefits. The rate of FBT for 2006–07 was 48.5 per cent. Employees do not pay income tax on fringe benefits.

Employers pay tax on the total value of the benefit less employee contributions. For example, if an employer makes a contribution, this reduces the taxable value of a benefit because employee contributions are considered as assessable income of the employer. The contribution to the employer could be to cover part or all the fuel used in the car over the FBT year—the 12 months beginning I April and ending 31 March. This reduced amount is the 'taxable value' of a fringe benefit or the 'fringe benefits taxable amount'.

The ATO only publishes taxation revenue from the FBT by broad industry category and the taxable value of benefits on motor vehicles. It does not publish an estimate of FBT paid on motor vehicles. However, it is possible to estimate the FBT tax payable on cars by assuming that the FBT rebate given to a 'non-profit organisation' is the same for all benefits. The percentage of rebate on non-profit organisations was 2.8 per cent of the FBT payable in 2006–07. The FBT for cars can be estimated using the following formula.

$$D = (A * G * F/100) - (B * E/100)$$

#### Where:

A is the total taxable value of benefit

- B is the FBT payable by non-profit organisations
- D is the final FBT estimate
- E is the percentage of rebate paid to non-profit organisations of the total FBT paid by all industries (ATO FBT in Taxation Statistics by year www.ato.gov.au)
- F is the FBT rate applicable in a given year (48.5 per cent in 2006–07) and
- G is the gross up rate applicable which is used to adjust the benefit for GST payable. It varies with the level of GST and FBT. There are two rates type I and type 2. Type I benefits are benefits for which the employer is entitled to an input tax credit for GST paid on goods or services acquired to obtain a fringe benefit. In 2007 the type I gross up rate was 2.1292. Type 2 benefits are benefits for which the employer is not entitled to an input tax credit because they are not subject to the GST. In 2007, the type 2 gross up rate was 1.9416. The type I gross up rate is used for G in the formula because it is not possible to estimate the proportions of type I and type 2 amounts so it is assumed that type 2 are quite small. The result for 2006–07 using this method is \$1.8 billion.

# **Abbreviations**

ABS Australian Bureau of Statistics

ANZSIC Australian and New Zealand Standard Industry Classification

ALTD Australian Land Transport Development

ASX Australian Stock Exchange
ATO Australian Taxation Office
ATS Australian Transport Statistics

BTCE Bureau of Transport and Communications Economics

BTE Bureau of Transport Economics

BTRE Bureau of Transport and Regional Economics

BITRE Bureau of Infrastructure, Transport and Regional Economics

DITRDLG Department of Infrastructure, Transport, Regional Development and Local Government

DOIT Department of Infrastructure and Transport

DOTARS Department of Transport and Regional Services

FAGs Financial Assistance Grants Identified for Roads

FBT Fringe benefits Tax

GFS Government Finance Statistics

GST Goods and Services Tax

RONIs Roads of National Importance

RTA Roads and Traffic Authority

# References

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