Australian Government

The Treasury

Economy-wide modelling for the 2016-17 Budget

Summary:

The Government's tax and superannuation plan announced in the 2016-17 Budget includes a number of changes to tax and superannuation. It is estimated that these changes will permanently lift the level of GDP by just over one per cent in the long term.

This note describes how the GDP impacts of the significant tax measures were estimated using Treasury's economy-wide model and presents the results of the external modelling.

The modelling framework

The long-term impact of the significant tax measures announced in the 2016-17 Budget was estimated using Treasury's economy-wide model.

Economy-wide models examine how significant tax changes affect key economic indicators, taking into account interactions between different taxes and the second round effects on incentives. Economy-wide models are necessarily a simplification of the economy that cannot account for all of the diverse effects of taxation on the Australian economy.

The economy-wide model used by Treasury to model the tax and superannuation plan is not suitable for short-term analysis. More detailed information on the economy-wide model used by Treasury for the 2016-17 Budget is available in two Treasury Working Papers:

Analysis of the Long-term Effects of a Company Tax Cut
http://www.treasury.gov.au/PublicationsAndMedia/Publications/2016/working-paper-2016-02

Understanding the Economy-wide Incidence and Efficiency of Major Australian Taxes
http://www.treasury.gov.au/PublicationsAndMedia/Publications/2015/working-paper-2015-01

Modelling the impact of the significant tax measures

Table 1 describes how the significant tax measures in the 2016-17 Budget were mapped into the economic model. The modelling is based on the assumption that these tax changes are implemented in full.

Table 1: Mapping of significant tax measures into Treasury's economy-wide model

Tax change	Model treatment	Main change to incentives captured by the model
Lowering company tax rate	Statutory company tax rate reduced from 30 per cent to 25 per cent.	Incentives to invest in Australia
Targeted personal income tax cut	Personal income tax revenue lowered, which in turn lowers the average personal income tax rate on labour earnings and investment income.	Workforce participation incentives
Tobacco changes	An indirect tax on households.	Increases prices reducing real incomes
Superannuation changes — contributions	Personal income tax revenue changed, which in turn changes the average personal income tax rate on labour earnings.	Workforce participation incentives
Superannuation changes — earnings	Personal income tax revenue changed, which in turn changes average personal income tax rate on investment income.	Only changes average household income
Small business changes *	Personal income tax revenue lowered, which in turn lowers the average personal income tax rate on labour earnings.	Workforce participation incentives

* Small business tax concessions are provided in both the company and personal income tax systems. The economic model does not disaggregate company tax revenue by company size and the impact of the small business tax measures was therefore modelled as a change in personal income tax revenue only.

Aggregate economic impacts of the significant tax measures in the 2016-17 Budget

Table 2 presents the results of the economy-wide modelling of the significant tax measures contained in the 2016-17 Budget.

The requirement for long-term budget neutrality is met through changes in government spending (assumption 1) and changes in personal income tax (assumption 2).

Table 2: Estimated long-run impact of combined tax measures
(per cent increase above no policy change)

	Assumption 1	**Assumption 2**
Gross Domestic Product (GDP)	1.2%	1.1%
Gross National Income (GNI)	0.8%	0.7%
Investment	2.9%	2.7%
Real after-tax wages	1.2%	0.8%
Real household consumption	0.9%	0.4%
Employment	0.3%	0.2%

Economic impacts of lowering the company tax rate

Australia's company tax rate has a significant effect on investment and the productivity of Australia's workforce. External modelling from Independent Economics and KPMG was commissioned to further inform the policy debate.

Table 3 presents the results from the external modelling of the long-term impact of lowering the company tax rate to 25 per cent. The requirement for long-term budget neutrality is met through changes in government spending (assumption 1), changes in personal income tax (assumption 2) and changes in non-distortionary taxes (assumption 3). Estimates using Treasury's model for the same company tax scenarios are also presented.

More information on the economic modelling prepared by Independent Economics and KPMG is available on the Treasury website at the following link.

Table 3: Scenario analysis of lowering the company tax rate to 25 per cent

Assumption 1

Long-term per cent change in level of:	**Treasury**	**IE**	**KPMG**
GDP	1.1%	0.9%	0.8%
GNI	0.7%	0.7%	0.7%
Investment *	2.9%	2.7%	1.9%
Real after-tax wages	1.1%	1.0%	1.3%
Real household consumption	1.0%	1.0%	0.8%
Employment	0.1%	..	0.2%

Assumption 2

Long-term per cent change in level of:	**Treasury**	**IE — bracket creep**	**IE — proportionate increase**	**KPMG**
GDP	1.0%	0.8%	0.7%	0.6%
GNI	0.6%	0.6%	0.5%	0.6%
Investment *	2.6%	2.6%	2.5%	1.6%
Real after-tax wages	0.4%	0.4%	0.4%	0.8%
Real household consumption	0.3%	0.6%	0.5%	0.3%
Employment	0.1%	..	-0.1%	0.1%

Assumption 3

Long-term per cent change in level of:	**Treasury**	**IE**	**KPMG**
GDP	1.2%	0.9%	0.7%
GNI	0.8%	0.7%	0.6%
Investment *	2.8%	2.7%	1.7%
Real after-tax wages	1.1%	1.0%	1.4%
Real household consumption	0.6%	0.7%	0.5%
Employment	0.4%	0.2%	0.2%

* For IE, estimates are presented for business investment and exclude small changes in non-business investment. '..' indicates estimates that are not zero, but are rounded to zero.