

IMPACT OF MIGRANTS ON THE COMMONWEALTH BUDGET

SUMMARY REPORT

2000-01 UPDATE

prepared for

Department of Immigration and Multicultural Affairs

by

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Canberra
January 2001

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1. Introduction

Access Economics was commissioned by the Department of Immigration and Multicultural Affairs (DIMA) to update and revise a model which estimates the impact of new permanent migrants on the Commonwealth Budget. The model was originally developed by DIMA and the Department of Finance and Administration. In June 1999, ACIL Consulting completed an audit of the model.¹ The base model for this update was the model at completion of the ACIL review as provided by DIMA.

This report provides a summary of the key results from the model, given a set of assumptions which are both conservative and consistent with Government forward estimates. It also provides a short discussion of the key tasks involved in the 2000-01 update. The companion *Methodology and Details Report* discusses the methodology and details of the update, and provides an overview to operating the model, as well as references to assist in future updates of the Commonwealth Budget model.

The specific tasks Access Economics was asked to address were as follows:

- Translate the Commonwealth Budget model on to an accrual basis
- Re-base the model to the 2000-01 financial year
- Incorporate the GST arrangements
- Review the Longitudinal Survey of Immigrants to Australia (LSIA) data used in the model
- Update estimates of direct and indirect tax paid
- Extend the model from five to ten years
- Link the model to a model which estimates the impact of migration on State and Territory budgets.

The following chapters provide an overview of the Commonwealth Budget model, list key results (including a comparison with the previous version of the model), and provide a short summary of key tasks in the update.

¹ *Impact of Migrants on the Commonwealth Budget*, ACIL Consulting, June 1999.

2. Model Overview

The Commonwealth Budget model provides an estimate of the impact an additional 1,000 migrants will have on the Commonwealth Budget, in terms of outlays and receipts. The additional migrants arrive in Year 1 (which is configured to a base year of 2000-01) and the model tracks those migrants over a period of ten years. There are no additional flows of migrants in future years.

Migrants are classified according to their visa categories. The visa categories used in the model are:

- Family
- Concessional (Skilled Australian Sponsored or SAS)
- Business Skills
- Independent
- Humanitarian.

In the model's output sheets the three skilled streams (concessional, business skills and independent) are shown both separately and as a weighted average to form a 'skilled total'.

The Commonwealth Budget model has been configured with a series of base assumptions. These provide a projection of the likely net impact on the Commonwealth Budget of additional migration. These assumptions can be changed by the user to provide alternate projections. They can also be changed to conduct scenario or 'what if' analysis.

The following sections describe some of the key drivers of results in the model.

2.1. Take-up Rates

The LSIA provides the main source of information in estimating new migrants' usage of Commonwealth funded activities. The survey tracks migrants who arrived in Australia in 1994-95 at points in time around one, two and four years after arrival. It is used as the basis for estimating new migrants' use of a range of social security allowances and pensions, their call on unemployment benefits (where eligible), as well as their use of Commonwealth funded education. The use of LSIA data in the model has been reviewed as part of this update.

Beyond four years after arrival, no further information is available on migrants' use of such activities. The model is set up so that take-up rates for some outlays converge to the Australian average by year 10, while those which are age specific (pensions and study assistance) retain their year 4 values. In both cases these values beyond year 4 are merely a starting point for future users of the model (their values have not been the subject of this update).

Usage of some other Commonwealth services, such as health care, is related to the age of the migrant. There is no information available on new migrants' use of Commonwealth funded health services compared to the rest of the population.

2.2. Outlays

Estimates of outlays in the model are driven by take-up rates and information on the cost of providing Government services. Unit costs in the model have been updated to a base year of 2000-01, using information provided in Budget documents and by Commonwealth Departments. Where projections of costs for future years were available, these were also inserted into the model. Where these were not available, unit costs have been linked to relevant price indices on the parameters sheet.

The base assumption for prices is growth of 2.5% a year, though for pensions the escalation rate is 4%, reflecting their benchmark to 25% of male total average weekly earnings. Price and wage assumptions are based on projections contained in the Commonwealth Budget Mid Year Review for 2000-01. Growth rates for these price indices can be changed by the user of the model.

2.3. Receipts

Estimates of receipts in the model are driven by LSIA information on incomes from which average direct tax payments are calculated. Receipts of indirect tax are also driven by LSIA income information, combined with information from the Household Expenditure Survey on propensities to consume taxed goods out of income.

A wage index drives migrant incomes beyond year 4 (the last year of LSIA information). This is set at a base rate of 4%, reflecting a projection of average economy-wide wages growth.

Base assumptions of 4% wages growth and 2.5% prices growth reflect migrants delivering productivity improvements, compensated by real wage growth. This productivity improvement helps to deliver an improved bottom line to the Commonwealth Budget over time (as expenses are mostly linked to the CPI, but revenues are mostly linked to wages).

3. Key Results from the Commonwealth Budget Model

3.1. Projected Outlays and Receipts by Migration Category

Table 1 provides a summary of estimated revenues and expenses on the Commonwealth Budget as a result of an additional 1,000 migrants by migration category. The skilled total represents a weighted average of the three skilled visa categories, while the total is a weighted average of all five visa categories.

The impact on the Commonwealth Budget is positive in all but the first year for average total migration. The trend is for improving returns to the Commonwealth Budget over time, except for year three where expenses escalate. This is due to the expiry of the two year freeze on a range of social security benefits which pushes up costs in that year.

Migrants under the three skilled streams provide a positive or neutral impact on the Commonwealth Budget in all years. Business skills migrants have strong incomes from year 1, while migrants under the independent category have very strong growth in incomes. Both therefore provide healthy tax flows to the Government. Incomes for migrants under the concessional stream are more modest, but are projected to generate tax revenues which remain above their call on Government outlays. Expenses for business skills and independent migrants decline steadily over the projection period, with business skills expenses turning negative by year 8 and independent expenses negative by year 10. This is due to an interest saving on public debt – with revenues strongly exceeding expenses from year 1, the addition of these migrants results in less public sector debt being required than otherwise. Reduced interest payments resulting from the lower public debt eventually overwhelm the call of this group on Commonwealth expenditure.

Migrants under the family category are projected to contribute positively to the Commonwealth Budget by year 6, with relatively higher outlays than the skilled streams. Expenses from humanitarian migrants outweigh revenues over the projected period. For this stream, expenses do decline markedly over the first 4 years, but the LSIA data showed only modest income growth, providing a small income base for future (wage-driven) projections.

The results presented are on a current price or nominal basis. They also show the average cost of migration on the Commonwealth Budget, where relevant costs are apportioned over all migrants (rather than an avoided cost basis where cash limited programs do not get additional funds). These estimates are conditional on a number of assumptions, some of which were outlined in Chapter 2. Assumptions and estimates are more fully detailed in the *Methodology and Details* report.

3.2. Comparison of Results with the Previous Model

The impacts on the Commonwealth Budget presented here differ from those reported from the previous version of the Commonwealth Budget model. The net operating surpluses presented here are more positive for skilled migrants and in total. A number of factors have contributed to the change in reported results. The following lists some of the key factors.

- The use of 2000-01 as a base year, implies all aggregates are scaled up from the previous version (which used 1997-98 as its base year).

- Calculation of indirect tax payments now allows for different propensities to consume taxed goods at different income levels. In particular, Household Expenditure Survey data suggests that those in the lowest income quintile on average have higher consumption than income. Using these different propensities to consume has resulted in higher estimates of indirect tax collected in total.
- Estimates of direct tax payments have also been updated for this exercise. The update took migrant incomes as covering wages and salaries, business income, investment income and taxable social security benefits. Deductions for work-related expenses were imputed on the basis of Australian Taxation Office information. This income base is possibly broader than that used for the previous model (on which information was not available). If so, that would result in higher estimates of direct tax collected.
- The model specifically allows for productivity gains, with base assumptions for wages growth higher than prices growth. This real wage growth translates into an improved net operating surplus for the Commonwealth Budget over time.
- This update includes more detailed financial reporting on the Commonwealth Budget, including specific allowance for additions to and savings on public debt interest. The latter improves the bottom line to the Commonwealth from skilled migrants over time.
- Working the other way (and so reducing net operating surpluses), the update of the LSIA data in the model with correction of some mis-specifications has generally resulted in higher estimates of take-up rates and consequently outlays.
- Update of unit cost information has also resulted in a number of changes, with differing impacts on outlays eg. vocational education outlays are much lower than previously reported, while Job Network outlays are higher.

Table 1: Impact on the Commonwealth Budget per 1,000 Immigrants by Migration Category (\$m)

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Family, per 1,000										
Revenue	3.1	3.9	4.2	4.7	4.8	5.0	5.2	5.4	5.7	5.9
Expense	4.4	3.8	5.1	5.0	5.0	4.9	4.9	4.8	4.7	4.6
Net Operating Surplus (deficit)	(1.3)	0.1	(0.9)	(0.3)	(0.1)	0.1	0.4	0.7	1.0	1.3
Concessional (SAL), per 1,000										
Revenue	3.7	4.1	4.5	4.9	5.1	5.3	5.5	5.7	5.9	6.1
Expense	3.7	3.5	4.3	3.9	3.7	3.7	3.7	3.6	3.6	3.5
Net Operating Surplus (deficit)	(0.0)	0.6	0.2	0.9	1.4	1.6	1.8	2.1	2.3	2.6
Business Skills, per 1,000										
Revenue	11.4	11.6	11.9	12.6	13.1	13.6	14.1	14.7	15.3	15.9
Expense	3.3	2.6	2.2	2.0	1.2	0.7	0.3	(0.2)	(0.7)	(1.2)
Net Operating Surplus (deficit)	8.1	9.0	9.7	10.6	11.9	12.9	13.9	14.9	16.0	17.1
Independent, per 1,000										
Revenue	7.7	9.8	11.3	13.2	13.7	14.2	14.8	15.4	16.0	16.6
Expense	4.2	4.1	4.0	3.1	2.6	2.1	1.6	1.0	0.4	(0.2)
Net Operating Surplus (deficit)	3.4	5.7	7.2	10.0	11.1	12.1	13.2	14.4	15.6	16.9
Skilled Total, per 1,000										
Revenue	7.3	8.6	9.5	10.7	11.1	11.6	12.0	12.5	13.0	13.5
Expense	3.9	3.6	3.7	2.9	2.6	2.2	1.9	1.5	1.0	0.6
Net Operating Surplus (deficit)	3.4	5.0	5.8	7.8	8.6	9.4	10.2	11.1	12.0	12.9
Humanitarian, per 1,000										
Revenue	1.8	2.1	2.1	2.6	2.7	2.8	2.9	3.0	3.1	3.3
Expense	11.5	7.8	6.8	6.7	6.7	6.9	7.0	7.1	7.2	7.3
Net Operating Surplus (deficit)	(9.7)	(5.6)	(4.7)	(4.1)	(4.0)	(4.1)	(4.1)	(4.1)	(4.1)	(4.0)
Total, per 1,000										
Revenue	5.1	6.2	6.8	7.7	8.0	8.3	8.6	9.0	9.3	9.7
Expense	5.9	4.7	5.4	4.6	4.8	4.6	4.5	4.3	4.2	4.0
Net Operating Surplus (deficit)	(0.8)	1.6	1.4	3.1	3.2	3.7	4.1	4.6	5.2	5.8

4. Key Features of the 2000-01 Update

The following lists the key tasks undertaken for the 2000-01 update of the Commonwealth Budget model.

4.1. Translation onto an Accrual Basis

The model has been extended into the full accrual form by the incorporation of non-cash operating transactions and all relevant capital transactions. In particular, expenses payable, depreciation expenses, interest expenses, income receivable income, user charges, capital expenditures and proceeds from net borrowing have been added to the existing budgetary items in the model.

The necessary information on some of these additional items was obtained from the Commonwealth Departments concerned, while others are estimated within the model itself.

By extending the coverage of government transactions in this way, it has been possible to present the model's results in the form of the impact of additional migrants upon:

- the Government's operating statement;
- its cash flow statement; and
- its balance sheet.

4.2. Re-base onto 2000-01 Financial Year

The model has been updated to reflect the 1999-00 intake of migrants, shown by the visa category of migrant (family, concessional (SAS), business skills, independent and humanitarian), and by whether the migrant was a principal applicant, child or other adult in the migrating unit. The age structure of migrants has also been updated, to show the average age structure of new migrants to the three years ending 1999-00. The model's summary sheets also show an aggregated 'skilled total' category, which is a weighted average of the three skilled categories: concessional (SAS), business skills and independent.

Unit costs in the model have been updated to a base year of 2000-01, using updated information provided in Budget documents and by Commonwealth Departments. Where projections of costs for future years were available these were also inserted into the model. Where these were not available, unit costs have been linked to relevant price indices on the parameters sheet. Growth rates for these price indices can be changed by the user of the model.

The model has been amended so that it is on a consistent current price basis or a constant price basis. The default is that all data is shown on a nominal or current price basis. The model has also been enhanced by allowing a switch between examining the impact of new migrants on an 'average cost' basis to an 'avoided cost' basis. An average cost basis apportions all relevant costs over all migrants and can be used to analyse any change in the level of migration (not just an additional 1,000 migrants). An avoided cost basis shows the impact on the Commonwealth Budget of a marginal increase in migration, where cash limited programs do not get extra funds.

4.3. Incorporate the GST Arrangements

This new tax system has required adjustments to both the income and expenses sides of the Commonwealth Budget model.

On the tax front, the effective tax rates used by the model (for both direct and indirect taxes) have been revised to reflect the GST-related changes.

The main revision to outlays in the model relates to the consequential changes to the basis upon which the Commonwealth provides general revenue assistance to the States and Territories. In particular, Commonwealth Treasury estimates of the GST revenue to be provided to the States and Territories have been incorporated into the model in place of the former financial assistance grants series.

4.4. Update of LSIA Data

Access Economics has reviewed and updated the LSIA data used in the model. This survey is the main source of information in estimating new migrants' usage of Commonwealth funded activities, and their contribution to Commonwealth tax collections.

The revision is mainly an update of previous estimates although a number of changes have been made to correct errors in the previous model. Where it may still be possible to improve certain aspects of estimation, suggestions have been provided in the *Methodology and Details* report, as have references to a number of SAS program files and Excel help files.

4.5. Update of Taxation Data

The update of the Commonwealth Budget model has included re-estimation of new migrants' contribution to Commonwealth Government revenue via direct and indirect taxes.

Estimates of migrants' direct tax payments have been updated to reflect the 2000-01 statutory tax rates and thresholds. Migrants' incomes are estimated from LSIA data, scaled up by appropriate deflators to reflect nominal wage movements between the LSIA survey and the years analysed for the Commonwealth Budget model. Migrants' incomes cover wages and salaries, business income, investment income and taxable social security benefits. Deductions for work related expenses were imputed on the basis of Australian Taxation Office information.

Estimates of indirect tax paid now reflect effective tax rates consistent with the new tax system and which vary according to the income level of migrants. The 1998-99 Household Expenditure Survey (HES) has been used to estimate average propensities to consume goods taxed by the Commonwealth by income quintile by migrant category. Tax collections from the 2000-01 Commonwealth Budget and Mid Year Review are used to estimate average tax rates across commodities.

This approach explicitly allows for different income levels across migrant categories to impact on the amount of indirect tax paid. It is benchmarked to tax collection estimates in the 2000-01 Commonwealth Budget and Mid Year Review. It is more transparent than the previous version which should assist in future updates.

4.6. Extension of the Model from Five to Ten Years

The previous version of the model estimated the impact on migrants on the Commonwealth Budget for the first five years after arrival. The model has been extended in this version to show impacts for ten years.

A range of wage and price indices escalate incomes and costs beyond LSIA information and official projections. Base assumptions of 4% wages growth and 2.5% prices growth reflect migrants delivering productivity improvements, compensated by real wages growth. This productivity improvement helps to deliver an improved bottom line to the Commonwealth Budget over time.

4.7. Link to States/Territories Budget Impact Model

Provision has been made to link the model to each of the State and Territory financial models being developed by a research project currently being sponsored by DIMA aimed at estimating the net impact of additional migrants on individual State and Territory budgets.

While no modelling links are necessary from the State/Territory models to the Commonwealth Budget model, a capacity to generate a consolidated Commonwealth-State impact of additional migration will be provided along with completion of all State and Territory models.