

Chapter 2

Mathematical Modelling of AUSFTA Economic Effects

2.1 This Chapter broadly looks at several econometric assessments of the likely effects of the AUSFTA that have been prepared, as well as other reports that address at a broader level the costs and benefits of bilateral trade agreements.

2.2 The Centre for International Economics (CIE) has prepared two econometric studies for the Australian government¹ - 2001 and again in 2004². The APEC Study Centre, Monash University also produced a study in 2001.³

2.3 A report by ACIL Consulting was commissioned by the Australian Government's Rural Industries Research and Development Corporation. This report (*A Bridge Too Far? An Australian Agricultural Perspective on the Australia/United States Free Trade Area Idea*), released in February 2003, was at odds with the findings of the DFAT-commissioned studies. It proved to be the catalyst for some academic and political disputation.

2.4 In March 2003, the Centre for International Economics published a critical rejoinder to the ACIL Report. In May 2003, a Productivity Commission Staff Working Paper was published entitled *The Trade and Investment Effects of Preferential Trading Arrangements – Old and New Evidence*. The Working Paper examined 18 existing preferential trade agreements (PTAs), and not those in prospect – such as the AUSFTA.

2.5 The Select Committee itself commissioned Dr Philippa Dee, an extremely experienced trade economist and Visiting Fellow at ANU, to carry out a further analytical and econometric study of the proposed Agreement. Dr Dee's substantial career in trade economics has included senior roles at the Productivity Commission and as a Director with the Industries Assistance Commission during the mid-late eighties.

2.6 Another assessment of the current AUSFTA, prepared by the National Institute for Economic and Industrial Research (NIEIR), was lodged with the Select Committee as part of a submission by the Australian Manufacturing Workers Union. The results produced by these studies have varied considerably and disagreements have arisen over the accuracy and validity of the various methodologies, and of the assumptions used by the modellers.

1 CIE 2001, *Economic Impacts of an Australia-United States Free Trade Area*

2 CIE 2004, *Economic Analysis of AUSFTA: Impact of the bilateral free trade agreement with the United States*

3 APEC 2001, *An Australia-United States Free Trade Agreement - Issues and Implications*

Centre for International Economics Study 2001***Economic Impacts of an Australia-United States Free Trade Area***

2.7 The first CIE study (2001) estimated that, over 20 years, the net gain for Australia would be \$US 10.9 billion and for the United States \$US 16.9 billion. By 2010, Gross Domestic Product (GDP) gains for Australia were estimated at 0.4%, representing an increase in monetary terms of \$US2.0 billion. The study estimated that in terms of GDP Australia would benefit more than the United States - but that estimate assumed that sugar would be included in the Agreement and would contribute to the projected gain.

2.8 This 2001 study used the APG-Cubed model of the Australian economy and a base assumption that full implementation of the Agreement would occur within five years. On this basis, Australian welfare gains were estimated at 0.3% by 2006, 0.4% by 2010 and 0.5% by 2020.

2.9 The model predicted that both countries would benefit from increased exports and that Australia's current account balance would improve by 0.9%. It also showed that trade creation would be greater than trade diversion and that New Zealand would also be a net beneficiary.

The APEC Study Centre, Monash University***An Australia-USA Free Trade Agreement: Issues and Implications***

2.10 The APEC Study Centre assessment, commissioned by the Department of Foreign Affairs and Trade, was released in August 2001. No pattern had been established for the agreement at that time and the study was therefore based on an estimate of what sectors would be included.

2.11 The APEC Study Centre employed three approaches:

- examine other trade agreements to see what was included and assess what precedents had been established;
- identify issues where either barriers were in place or where a dispute had occurred; and
- identify common interests which could be advanced by an FTA, to mutual benefit.

2.12 The APEC Centre's assessment concluded that an FTA would revitalise the trade liberalisation process in each country, increase Australia's competitiveness and increase GDP. Australia, as the smaller economy with lower income levels and smaller economies of scale in cost structures, would derive greater benefit than the United States, due to market liberalisation and more competition in the market.

2.13 Over the medium term of twenty years, it concluded that the net increase in economic welfare could be nearly \$US 10 billion for Australia. This estimate,

however, was based on the anticipated removal of all trade barriers. The APEC Centre study noted that the earlier CIE study did not include any allowance for indirect and dynamic effects of an FTA. It commented that these effects could be as important as the direct impact for Australia, albeit harder to quantify.

2.14 The predicted increase in two-way investment would provide Australia with additional support for consumption, income growth and improved living standards. Investment, it was argued, also brings with it, management and technical skills that often are not available locally.

ACIL Consulting, A Bridge Too Far?

An Australian Agricultural Perspective on the Australia/United States Free Trade Area Idea

2.15 The ACIL Report assessed that the economic benefits of the FTA as a whole would be at best very finely balanced, with the impact on Australia's farmers likely to be negative. In ACIL's view, the case for the FTA had to rest on broader strategic assumptions, but the articulation of these had not been made clear.

2.16 Trade diversion was also a serious issue that threatened any presumed benefits of the FTAs with America. The modelling conducted by ACIL showed that over a 5 year phase in period of complete free trade with the United States, the outcome would be slightly detrimental to the Australian economy.

2.17 Ironically, some of the biggest gains suggested by ACIL included large increases in the volume of trade in sugar in particular, and to a lesser extent dairy products and meat.

2.18 ACIL contested the argument that any gains from the AUSFTA would simply add to the gains Australia might enjoy through the Doha round within the WTO or from unilateral cuts in protection at home. The domestic protection given by the United States government to its agricultural producers, enshrined in the so-called Farm Bill of May 2002, cast an even bigger shadow on the feasibility of Australia making gains in agricultural exports.

2.19 ACIL emphasised throughout its report the primacy of the multilateral trade option in terms of advancing Australia's national interest.

Centre for International Economics, 2004

Economic Analysis of AUSFTA: Impact of the bilateral free trade agreement with the United States

2.20 This latest study updates the earlier scoping study carried out by CIE in 2001. CIE commented that availability of the final range of commodities and services to be included, along with the timing of the liberalisation process, enabled it to evaluate the likely economic effects of the Agreement. Similarly, the commitments agreed upon

for sectors such as intellectual property, rules of origin and investment assisted in refining that assessment.

2.21 CIE acknowledged the ongoing debate over the methodologies used in the various mathematical studies of the effects of the Agreement. It explained in some detail the nature of the two modelling frameworks it used in making the assessment in this report. One model used, the so-called G-Cubed, is a dynamic model used to estimate the path of changes over time. The other, the Global Trade Analysis Project (or GTAP), is a comparative static model. That is, it can supply snap-shots of the economy at a given point but cannot trace the progress of dynamic effects continuously.

2.22 The dynamic effects of this AUSFTA take on special significance because of the long phasing period being applied to some of the arrangements. The use of two separate models enabled CIE to assess the likely progressive results of the AUSFTA and also to take advantage of the greater level of detail available through the GTAP model.

2.23 Because of the disagreements over methodologies, particularly over the size of dynamic gains, CIE also employed a sensitivity analysis covering the most probable range of estimates. That analysis predicts a 95% chance that welfare in Australia will be improved by between \$1.1 billion and \$7.4 billion per year after 20 years, when all of the liberalisation commitments will have worked through the economy.

2.24 CIE's analysis indicates that in the first year immediate benefits will be partly offset by adjustment costs. Thereafter, the benefits will increase, as tariffs are reduced and new investment takes effect. CIE estimates that investment liberalisation will make the biggest contribution to economic growth and welfare.

2.25 This study differs in several ways from the first study by CIE. It takes into account factors which were either unknown or unclear in 2001, namely that:

- full liberalisation has not been achieved;
- not all services trade barriers will be removed;
- investment liberalisation has this time been explicitly considered; and
- quantitative effects have been analysed.

2.26 The study uses a discounted present value approach to quantify the benefits of the Agreement. It estimates that over 20 years, Australia will receive a net welfare benefit of \$52.5 billion if measured as real GNP or \$57.5 billion if real GDP is used.

2.27 The largest contribution to economic growth and welfare is expected to come from investment liberalisation. Reduction of barriers to investment is expected to reduce the equity risk premium and lower the cost of capital, leading, in turn, to a rise in investment.

2.28 Trade liberalisation is expected to increase welfare and GDP by about \$1 billion per year. It should reach this level within ten years. There is also potential for

future additional gains, which are not quantifiable at this early stage. There will be some offsetting losses through trade diversion. CIE commented, however, that trade diversion in services trade should be minimal.

2.29 Export gains deriving from trade liberalisation will initially be offset by import increases associate with increased investment. After the first ten years, however, CIE's projections indicate that exports will grow faster than imports.

2.30 The exchange rate is expected to appreciate slightly against the \$US initially, then ease to end the decade in a small depreciation. Labour effects are also expected to change direction, an initial rise in employment to 0.3% of total jobs by 2012, then easing to the 'natural rate of full employment'. At that time benefits will be in the form of an increase in real wages of about 1.4%.

2.31 CIE also assessed the likely effects of agreements reached in other sectors of the Agreement. In summary, its findings were:

- the commitment relating to the PBS is not likely to have a material effect on the cost of the scheme itself, or of medicines supplied under it;
- the incremental cost of the extension of copyright could not be accurately determined. The study estimated that it would be marginal;
- safeguard provisions on beef and horticulture products are not expected to have any material effect;
- commitments on services will allow foreign-owned subsidiaries or branches in Australia to benefit from the Agreement. Any concessions on services given by either country to third countries must be passed on to the other. In effect, this will minimise the possibility of trade diversion in services.
- the Agreement should not have an adverse impact on the Australian environment. It does not prevent Australia from meeting its international environment obligations and should lead to an expansion in energy efficient industries.

National Institute of Economic and Industry Research Study

2.32 This study compares the estimated effects of the AUSFTA with the situation if present arrangements were to continue. It assumes economic growth rates of 2.5% a year for the US and 2.8% for Australia. These are lower growth rates than those achieved in the nineties and are based on an assessment that neither country is now able to afford the debt increases which supported those higher growth rates.

2.33 In its overall assessment, NIEIR rejects the positive findings of the CIE study and estimates the Agreement will result in an overall loss of \$46.9 billion (0.39% of GDP) in net present value terms. NIEIR also estimates an average annual loss of employment of 57,700, with a 2.5% chance that the loss will exceed 195,400. It suggests the downside risks involved in the AUSFTA could cause the estimated losses to accelerate dramatically. It concludes that on average manufacturing employment

will be 17,300 per annum less as a result of AUSFTA. By 2025 manufacturing employment will be almost 40,000 less as a result of AUSFTA⁴.

2.34 The NIEIR study is critical of several aspects of the CIE study. One main criticism refers to the weight CIE has given to gains from services trade (37% of the gains from trade liberalisation). NIEIR preferred instead to exclude services trade from its calculation of direct effects, although it says that the effects are partially captured in other calculations. NIEIR also criticises what it regarded as CIE's refusal to acknowledge the possibility of negative economic outcomes from foreign investment.

2.35 The main focus of the NIEIR study is on what it describes as a "considerable loss of sovereignty", caused by the terms of the AUSFTA. It claims that the result will be constraints on the freedom of future Australian governments to control domestic economic activity and employment and to stop the drain of economic assets, such as intellectual property and technology, to overseas companies.

2.36 The study concludes that this loss of sovereignty will remove a government economic tool which is essential if the Australian economy is to make the transition to a knowledge-based economy.

Dr Philippa Dee – Report, June 2004

2.37 This Committee commissioned Dr Philippa Dee to carry out an assessment of the AUSFTA. The final paper was recently received by the Senate Committee and was publicly released on 16 June 2004.

2.38 The Dee Report identifies the substantive chapters of the AUSFTA (in the sense of offering more than the status quo), describes some of the likely economic effects of those chapters, and concludes with a critique of the DFAT/CIE modelling assessment of the AUSFTA.

2.39 Dr Dee argues that the specified new promises to abstain from trade barriers in Services and Investment will not cost either party commercially and could be easily multilateralised.

2.40 While some chapters define the market opening for goods, services and investment, other chapters circumscribe the extent of market opening. Many of the substantive chapters establish new consultation mechanisms or require additional administrative measures. In some cases these oversee the market opening elements of the AUSFTA, while others facilitate enforcement of customs or other regulations, or aid transparency.

2.41 Aspects of the substantive chapters also establish precedents that may affect Australia's options in future bilateral or multilateral forums. Such precedents include the omission of sugar, the acceptance of tailor-made rules of origin, and widespread safeguard provisions.

4 NIEIR, response to question on notice, 22 June 2004

2.42 The chapter dealing with intellectual property is precedent setting in many respects. Essentially, argues Dee, Australia has been required to adopt US standards, but only when it broadens rather than narrows the scope of IP protection. The asymmetric adoption of United States standards in a way that overrides Australia's domestic copyright and digital law reform processes has also set another important precedent.

2.43 In terms of the economic effects of the FTA, Dr Dee identifies some potential for trade diversion in a manner detrimental to Australia, but even more so for the United States. There are also question marks over whether Australian businesses will be able to take advantage of opportunities in the United States government procurement market. Dr Dee argues that the CIE estimate of Australians achieving about 30% of Canada's level of United States market penetration is more likely to be only 4% - a function of Australia's smaller size and being 30 times further away from the US.

2.44 While the CIE claims it is difficult to estimate the economic impact of copyright extension, Dr Dee calculates, on the basis of ABS statistics about Australia's payments for royalties and license fees, that Australia's net royalty payments could be up to \$88 million higher per year under the AUSFTA.

2.45 Dr Dee also argues that the AUSFTA's tighter rules of origin regime, and the associated compliance costs, will reduce the proportion of preferential trade substantially below what the CIE model suggests. The omission of sugar, and the government's \$440 million package to the sugar industry, means a net welfare cost to the Australian taxpayer of \$70 million. This translates to an annual equivalent annuity value of \$5 million per year.

2.46 Examples of what Dr Dee identifies as shortcomings in the CIE study include:

- (i) No assessment of the possible effects of the non-agricultural safeguards;
- (ii) Inappropriate treatment, in the services trade area, of the issue of licensing restrictions; and
- (iii) Inappropriate modelling, in the investment area, of the relaxation of FIRB screening. FIRB screening is an *ex ante* factor in investment decisions, while equity risk premiums capture the effects of events that happen *ex post*. It is highly doubtful, therefore, that FIRB screening has any general effect on Australia's risk premium.

2.47 Dr Dee provides an alternative assessment of the economic benefits by amending the assumptions and inputs along the lines indicated above. On Dee's calculations, the annual gains to Australia from the AUSFTA would amount to around \$53 million.

2.48 Dr Dee also provides comprehensive tables comparing the AUSFTA with Australia's position under WTO agreements and under GATS, and also a table comparing the AUSFTA with the Australia-Singapore, US-Singapore and US-Chile agreements.

2.49 At a June 2004 seminar on the FTA held at Parliament House, one of Australia's leading economic and trade specialists Professor Ross Garnaut made the following comments about reports by different economic modellers. He observed:

I have made some comments to [the Joint Standing Committee on Treaties] about the CIE report. I don't think it's a credible bit of work and you're not seeing support from independent professional economists for it. Before the Senate Committee I understand that a Treasury official asked to comment on it talked about it being an interesting piece of imaginative economics, words of that kind. We can check the Hansard for the exact words.

But in any case it was put forward and commissioned by a participant in the debate. I think the response to Dr Dee's report for the Senate Committee really underlines the need for independent and transparent analysis. Before it had been released, before we had seen it, and I understand before Minister Vaile had seen it, Minister Vaile criticised it and said he will have DFAT answer it. Well, that demonstrates that we're not getting an objective, independent, transparent analysis as a basis of a good public discussion. And we won't unless we step back and go through proper processes.

... There's a big literature about the political economy of trade policy which explains why it's so easy to go down a path that is not in the national interest. So I myself having lived through the debates of the '60s and the '70s am not greatly challenged by a strong weight of opinion from interested parties in favour of a particular style of trade policy. If a lot of us had been daunted by that we wouldn't have had the liberalisation and the strong growth in recent times in Australia.⁵ ..

5 Professor Ross Garnaut, Vital Issues Seminar "Australia – United States Free Trade Agreement" Parliament House, 17 June 2004