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SENATE

SELECT COMMITTEE ON A NEW TAX SYSTEM

Reference: A new tax system

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SENATE

SELECT COMMITTEE ON A NEW TAX SYSTEM

Monday, 15 February 1999

Members: Senator Cook *(Chair)*, Senator Ferguson *(Deputy Chair)*, Senators Conroy, Gibson, Murray, O'Chee and Sherry

Substitute member: Senator George Campbell

Participating members: Senators Brown, Colston, Harradine and Margetts

Senators in attendance: Senators George Campbell, Jacinta Collins, Conroy, Cook, Ferguson, Gibson, Harradine, Murray, O'Chee and Sherry

Terms of reference for the inquiry:

(1) That a select committee, to be known as the Select Committee on a New Tax System, be established to inquire into and report, on or before 18 February 1999, on the economic theories, assumptions, calculations, projections, estimates and modelling which underpinned the Government's proposals for taxation reform, contained in *Tax reform: not a new tax, a new tax system*.

(2) That, in conducting its inquiry, the committee examine the following matters:

(a) the estimated levels of revenue to be generated or foregone due to the proposed changes, including the estimated level of revenue to be generated by imposing a goods and services tax (GST) on the basic necessities of life (such as food, clothing, shelter and essential services) and books;

(b) the effects of the proposed changes on:

(i) national Gross Domestic Product,
(ii) national export performance and national debt,
(iii) the national Consumer Price Index, and
(iv) the distribution of wealth in the Australian community;

(c) the effects of the package on future federal budget revenues, expenditures and surpluses, including a critical assessment of the economic assumptions underpinning the Treasury's projections in this regard;

(d) the effects of the taxation and compensation package on disposable income and household spending power for a range of 'cameo profiles', including but not limited to those presented in the proposals, under the following scenarios:

(i) a GST extended to the necessities of life (such as food, clothing, shelter and essential services), and

(ii) a GST not extended to the necessities of life (such as food, clothing, shelter and essential services);

(e) with the aim of identifying families and groups who may be disadvantaged by the Government's proposals, focusing on lower and fixed income individuals, families with dependent children or adult members, groups and organisations, and those with special needs, such as people with disabilities;

(f) the assumptions made as to consumption and saving patterns and the cost of living for the various 'cameo profiles';

(g) whether the stated objectives of the package can be met by using an alternative and fairer approach; and

(h) such other matters as the committee considers fall within the scope of this inquiry.

(3) That the committee also inquire into and report, on or before 19 April 1999, on the broad economic effects of the Government's taxation reform legislation proposals with regard to the fairness of the tax system, the living standards of Australian households (especially those on low incomes), the efficiency of the economy, and future public revenues, including:

(a) the effects on equity, efficiency and compliance costs of including, or not including, food or other necessities of life in the GST, together with any related adjustments to the package if food or other necessities of life were GST zero-rated;

(b) the effectiveness of the package in easing the poverty traps facing people on low incomes, and reforming and streamlining tax and income support for families with children, taking into account the static and life-cycle impacts on families with children;

(c) options for amending the income tax schedule to make it more equitable;

(d) the findings of the Tax Consultative Committee chaired by David Vos;

(e) options for improving the effectiveness and fairness of the tax system and reducing inequitable or unreasonable tax avoidance and minimisation, including consideration of alternative areas for tax generation, either where there are current tax concessions or where Australia's taxation system does not address major tax potential, and without limiting the foregoing, the consideration of taxation of foreign companies operating in Australia, including the relative merits of resource rent taxes, royalties or land taxes as compared to company tax in securing a fair compensation to Australia for use of its resources, whether the 150% tax concession for research and development should be restored and whether small companies should be allowed to be taxed as partnerships.

(f) the potential for tax avoidance and evasion, including an examination of the effects on the cash economy, and the potential impact of electronic commerce on the future viability of a GST;

(g) the effects on compliance costs;

(h) the potential for reducing payroll tax, including by providing incentives to create long-term employment and by replacing payroll tax with a carbon tax;

(i) whether there are other means available for rebating or reducing the indirect taxes or excessive user charges embedded in exporters costs;

(j) excises, including those on fuel, tobacco and alcohol - identifying the industries which benefit, and to what extent, from the proposed changes to taxes on fuels;

(k) the effects on interest rates;

(l) the effects on investment, in both physical and human capital formation;

(m) the effects on small business;

(n) the effects on the non-profit sector, including the total amounts of money contributed by the sector, administrative costs, impacts on the viability of the organisations, and the consequent effects on the wellbeing of the community;

(o) the effects of the GST on particular industries, including:

- (i) key service industries such as tourism,
- (ii) the Australian automobile and related industries, having particular regard to the effects of changes to fuel excises,
- (iii) other 'invisible' export industries, such as education and financial services, and
- (iv) the international competitiveness generally of Australian industries;

(p) the implications of not requiring that the GST component of goods and services be itemised on receipts;

(q) the effects of the taxation reform legislation proposals on rural and regional stakeholders, including:

- (i) the effects on particular regions,
- (ii) the effects on rural and regional communities of different tax regimes on fuel - especially the cost of transport of goods to rural communities,
- (iii) the effects on primary industry of replacing the current sales tax exemption on agricultural machinery with a GST, and
- (iv) the effects of imposing a GST on food and other necessities of life on remote communities, including Aboriginal and Islander communities;

(r) the effects of the Government's taxation reform legislation proposals on state and local government administration, including:

- (i) the effects of the package on future federal-state financial relations and the capacities of state and local governments to adequately finance their respective responsibilities in both the short-term and the long-term, including the effects of the proposed transfer of responsibility for local government financial assistance to the states, and whether it discriminates between states,

- (ii) the implications for specific purpose programs,

(iii) mechanisms required to lock in commitments made by federal and state governments with regard to the new arrangements,

(iv) the implications for future federal-state financial relations of not extending the GST to the necessities of life (such as food, clothing, shelter and essential services) and books, and any adjustments to the proposed arrangements which would be required to federal-state financial relations,

(v) the implications of the package for the quality and affordability of public utility services and for the public utility concessions for social security recipients,

(vi) the effects of application of the GST, and of changes to tax status, on local government and its activities, particularly commercial activities,

(vii) the implications for the delivery of Commonwealth Government services, including employment services, welfare and other social and cultural services, and

(viii) the extent to which the proposed compensation arrangements are secure from change to below adequate levels;

(s) the adequacy of measures to ensure that consumers fully benefit from the abolition of existing taxes;

(t) the effects of the taxation reform legislation proposals on legal and constitutional matters, including:

(i) the constitutionality of the proposed mechanism for future changes to the GST, including whether such changes would present a significant hurdle to future increases, or reductions if deemed necessary to stimulate the economy,

(ii) the constitutionality of the proposed reorganisation of federal-state tax arrangements and whether the powers and functions of states and territories are materially affected by this reorganisation, and

(iii) the effects of the proposals on the cost of access to justice; and

(u) options for amending the proposed legislation to improve its fairness or efficiency.

(4) That, in reporting on the matters referred to in paragraph (3), the committee have regard to the reports of the references committees referred to in paragraph (17) and integrate the findings of those committees into its final report where relevant.

(5) That the committee consist of 7 senators, 3 nominated by the Leader of the Government in the Senate, 3 nominated by the Leader of the Opposition in the Senate, and 1 nominated by the Leader of the Australian Democrats.

(6) That the committee may proceed to the dispatch of business notwithstanding that not all members have been duly nominated and appointed and notwithstanding any vacancy.

(7) That:

(a) senators may be appointed to the committee as substitutes for members of the committee in respect of particular matters before the committee;

(b) on the nominations of the Greens or independent senators, participating members may be appointed to the committee; and

(c) participating members may participate in hearings of evidence and deliberations of the committee, and have all the rights of members of the committee, but may not vote on any questions before the committee.

(8) That the committee shall elect as its chair a member nominated by the Leader of the Opposition in the Senate.

(9) That the committee shall elect as its deputy chair, immediately after the election of the chair, a member nominated by the Leader of the Government in the Senate.

(10) That the deputy chair act as chair when there is no chair or the chair is not present at a meeting.

(11) That the committee have power to send for and examine persons and documents, to move from place to place, to sit in public or in private, notwithstanding any prorogation of the Parliament or dissolution of the House of Representatives, and have leave to report from time to time its proceedings and the evidence taken and such interim recommendations as it may deem fit.

(12) The quorum of the committee shall be a majority of the members of the committee.

(13) The committee set 29 January 1999 as the date for receipt of submissions.

(14) That the committee hold hearings in each state and territory as required.

(15) That the committee be provided with all necessary staff, facilities and resources and be empowered to appoint persons with specialist knowledge for the purposes of the committee with the approval of the President.

(16) That the committee be empowered to print from day to day such documents and evidence as may be ordered by it and a daily Hansard be published of such proceedings as take place in public.

(17) That the following matters be referred to references committees in accordance with the schedule below for inquiry and report by 31 March 1999, and that in undertaking these inquiries the committees have regard to the report of the Select Committee referred to in paragraph (1) and consult widely, holding hearings in each state and territory, as required. Submissions to these inquiries are to be made by 29 January 1999.

Committee	**Matters for Inquiry**
Community Affairs	The impacts of the Government's taxation reform legislation proposals on the living standards of Australian households (especially those on low incomes), including: (a) the scope and effectiveness of the proposed arrangements on charities, child care services, aged care services, welfare services, local government human services and all not-for-profit organisations in maintaining the quality and affordability of essential community services, including the implications for the public funding of these services and the implications for the commercial activities of these organisations, and whether unconditional GST-free status should apply to *bona fide* charities;

	(b) a detailed examination of the zero-rating of health services, including an examination of which services should be zero-rated; (c) the effects on community sector organisations of changes to their tax exempt status, and of the compliance costs of the proposed tax arrangements; (d) the effects of the proposed private health insurance rebate; (e) the effects on people with disabilities; (f) the effects on public, community and private housing, including the levels of rents; and (g) options for amendments to improve the fairness or efficiency of the proposed legislation.
Employment, Workplace Relations, Small Business and Education	The employment incentive and education impacts of the Government's taxation reform legislation proposals, including: (a) the scope and effectiveness of the proposed zero-rating arrangements for education in maintaining its quality, accessibility and affordability; (b) the effects on employment; (c) the effects of the proposed GST treatment on the quality, accessibility and affordability of employment services; (d) the effects on education of imposing a GST on, or zero-rating or exempting books and associated education resources; (e) the effects on education of imposing a GST on ancillary resources, services and commercial activities, including the effects on overseas students; (f) the effects of the proposed changes to the tax system on employment; (g) the effects on wage costs, particularly if the basic necessities of life are taxed; (h) the scope and effectiveness of changing the unemployment benefits, pensions and Newstart Allowance 'tapers'; (i) the effects of the proposed changes to the tax system on training and adult education; and (j) options for amendments to improve the fairness or efficiency of the proposed legislation.

Environment, Communications, Information Technology and the Arts	The broad effects of the Government's taxation reform legislation proposals on the environment, the arts and information technology, including:

(a) the environmental effects, and likely impacts of changes to fuel excises, particularly but not only diesel, and the replacement of WST with GST on vehicles and other transport services including:

(i) possible increases in greenhouse gas emissions,
(ii) increases by amount and type of air pollution,
(iii) the effects on public and rail transport,
(iv) the effects on alternative energy use in transport including, but not limited to, compressed natural gas,
(v) the changed effects on native forests of logging or woodchipping due to the tax package, and
(vi) the changed effects of mining in environmentally sensitive areas due to the tax package;

(b) the environmental effects of the replacement of Wholesale Sales Tax by the GST and associated changes in fuel excises on electricity and natural gas;
(c) the impacts of the proposed tax changes on the prices and existing and potential use of renewable energy particularly but not only solar energy technology and energy efficiency equipment;
(d) the environmental effects of any changes to taxes on exports;
(e) the consistency or otherwise of the proposed changes in taxation and excise arrangements with Australia's international treaty obligations, including its obligations under the Framework Convention on Climate Change;
(f) options for a tax system which better achieve environmental objectives,including incentives for fuel efficiency and alternative energy sources, such as measures which promote both environmental protection and employment generation;
(g) the extent to which environmental impacts were considered in the drafting and final copy of the Government's tax package;
(h) the scope of any consultation on environmental matters with experts in Environment Australia or any other Government departments other than the Treasury and Finance departments;
(i) the impact of a GST on ticket sales for the performing arts;
(j) the effects of a GST on the transfer of grant monies for arts projects;

(k) the effects of the tax proposals on sponsorship provided by the private sector to individual artists and arts organisations;
(l) the extent to which the package will block consideration and introduction of 'ecotaxes';
(m) the effects of a GST on not-for-profit conservation and arts organisations; and
(n) options for improving the environmental effects of the package.

(18) That the provisions of the bills implementing the proposed new tax system stand referred to the previously mentioned committees for inquiry and report in conjunction with the terms of reference authorised by this resolution, as soon as the bills have been introduced in the House of Representatives.

(19) That when the bills referred to in paragraph (18) are first introduced in the Senate and a motion is moved for the second reading of the bills, debate on that motion shall be adjourned at the conclusion of the speech of the senator moving the motion and resumption of the debate shall be made an order of the day for 19 April 1999 without any question being put.

WITNESSES

Committee met at 8.18 a.m.

CHAIR—Today the committee continues its inquiry into the first stage of the proposed changes to the Australian taxation system. The Senate referred the inquiry to the committee on 25 November last year. The committee expects to report on the first stage of its inquiry by 18 February 1999 and the second stage of its inquiry by 19 April this year. For the record, this is a public hearing and, as such, members of the public are welcome to attend.

Before we commence taking evidence, let me place on record that all witnesses are protected by parliamentary privilege with respect to submissions made to the committee and evidence given before it. Parliamentary privilege means that special rights and immunities attached to the parliament or its members, and others, are necessary for the discharge of the functions of the parliament without obstruction and without fear of prosecution. Any act by any person who operates to the disadvantage of a witness on account of evidence given by him or her before the Senate or any committee of the Senate is treated as a breach of privilege.

DIXON, Professor Peter Bishop, Director, Centre of Policy Studies, Monash University

MURPHY, Mr Christopher William, Director, Econtech

CHAIR—I welcome Mr Chris Murphy and Professor Peter Dixon. Before I call Mr Murphy I might indicate to the committee the process by which I intend to conduct this morning's hearing. I think the most satisfactory way of proceeding is for us to hear Mr Murphy, and for the Chair not to allow questions or interjections so that we can reasonably and comprehensively, but also efficiently, complete that part of the evidence. At the conclusion of Mr Murphy's overview of his paper we will put questions to him. I would like that section to be questions of clarification or amplification rather than forensic pursuit of further argument.

I would then like to call Professor Dixon and invite him to respond, if he chooses, to the commentary made about his paper and the views put forward by Mr Murphy. At the conclusion of any remarks that Professor Dixon has to make, we will again adopt the practice of some tight, focused questions on clarification or amplification. For a relatively short time, I will invite both Mr Murphy and Professor Dixon, if they have any comments to each other, to make those comments. We will then have questions from the committee.

The whole purpose of this is to inform the mind of the committee, and not to entertain us, or those who are watching these proceedings, so we need to keep in mind our timetable of having to report on 18 February. We have three hours set aside this morning. I am sure, even under that format of trying to provide a balance between the witnesses being unconstrained in the presentation of their material and the committee being unconstrained in its efforts to understand or probe it that the three hours will go fairly quickly.

The next procedural matter that presents itself is that we have released submissions on the morning of the presentation of them. For the record, I received a copy of this submission on Saturday. Part 5 of the submission and the remaining parts of the submission have been handed to me this morning. The reason we did not proceed with this hearing on Friday is that a majority of senators felt that it was important to have the submission before them for the purposes of acquainting themselves with the content of that submission prior to hearing evidence on it so that they were in a position to comprehend it and be able to ask questions.

For the balance of the submission that we have just received, we are not in a position where we have read it in advance and in a position to ask questions about it. Rather than adjourn the proceedings, in order to enable us to do that and therefore risk our ability to report by the date set down by the Senate, I propose that we release the submission in its entirety this morning. But I do record that it is unsatisfactory and that on this occasion the normal practice has not been able to be adhered to.

Having said that, I recognise the time constraints under which everyone is working. We have a time constraint imposed on us by the Senate which we must answer, and I would like to bend my best endeavours to do so, but I point out the difficulty under which we are working this morning. Are there any preliminary matters?

Senator HARRADINE—Mr Chairman, just in advance I would like to apologise for appearing to come in and go out. I have another important committee on at the same time. It is no form of disrespect to the committee or to the persons giving us their help.

CHAIR—Thank you, Senator Harradine. I rule that the submission is now released as a privileged document of this inquiry.

Mr Murphy—I have been asked by this committee to provide a review of Professor Dixon's report to it on the effects of the proposed new tax system—or ANTS—and also on the variations to ANTS which Professor Dixon was commissioned to look at. As well as providing that review, I have also taken the opportunity to compare the results from the Monash model produced by Professor Dixon with results from my own modelling which I presented to you a little over a week ago. That was, in any case, envisaged as what I would be doing in the review anyway.

Basically, I will be comparing the results of the Monash modelling which Professor Dixon has undertaken for the committee with similar modelling undertaken using Econtech's Murphy Model 303, or MM303. I want to make it clear at the outset that I regard Professor Dixon as a highly distinguished modeller and also that his Monash model is a highly distinguished model, so I do not want there to be any misunderstandings about that at any stage.

I will, however, be suggesting that, at the end of the day, in terms of measuring the economic benefit to the country from a new tax system, on that particular narrow issue the modelling from MM303 is definitely superior. But I think that reflects the fact that Econtech has spent several months building models specifically for that purpose, whereas the Monash model has essentially been taken off the shelf and run for that purpose without the same kind of additional development work.

Overhead transparencies were then shown—

Mr Murphy—The outline of my talk basically follows the outline of my review. I will quickly run through the attached design principles, the new tax system, the economic modelling of it with both Monash and MM303, the national effects and the industry effects. An issue which I will be spending most attention on is the estimate of the welfare gain from ANTS, and then possible changes to ANTS which the committee has raised, and also other issues that the committee has raised, and then the findings of my review.

This will get fairly technical in places. I do not think there is any way around that, unfortunately. You will find the findings of the report gathered together on the last three pages. They contain cross-references to the relevant parts of the report where those findings are developed. One way of getting into the report would be to review the findings and then work backwards. I appreciate that going through the report from start to finish is fairly hard going. I presented a lot of the material here last week, so I presume you would like me to pass through that fairly quickly. It think it is worthwhile saying something about it though, just to keep everything properly in context.

The accepted three principles for the good design of a tax system are efficiency, simplicity and equity. The MM303 and Monash models are designed to look at efficiency. They are not designed to look at the simplicity issue, which really is not a modelling question, and they are not designed to look at the equity issue, for which you need to turn to other models. We are looking at the specific issue of efficiency. The issues of simplicity and equity are equally important. You should see what I am saying in that broader context.

Senator MURRAY—Why would you rank simplicity as the same as efficiency?

Mr Murphy—In my paper I say I am not putting these three in any particular order.

Senator MURRAY—That is what I am referring to.

CHAIR—You might like to omit that question, Senator.

Senator MURRAY—You think so?

CHAIR—With great respect.

Senator MURRAY—Okay.

Mr Murphy—In terms of efficiency, what is the broad issue? As we said last time, narrowly based taxes raise the price of taxed goods relative to the price of untaxed goods. That means that prices no longer reflect production costs leading to distorted economic choices. So replacing narrow taxes with a GST, which is a broadly based tax, can lead to a gain in consumer welfare. At the same time, though, there are some selective or narrowly based taxes which can be justified on the grounds of what economists would call negative externalities. These are the special taxes on alcohol, tobacco, petrol and gambling. There are also arguably positive externalities associated with the use of public transport which may justify the subsidies that are applied to public transport. So I have assumed those existing narrowly based taxes and subsidies are justified, but the other narrowly based taxes and subsidies that we have, such as the wholesale sales tax, for example, do not have any particular rhyme or reason.

How do we go about measuring the gain from moving to a more broadly based tax system, the gain in efficiency, that is, the gain in consumer welfare? The steps we need to take first are to model the existing tax system and the new tax system; from that, estimate the effects of the tax changes and the pattern of consumer prices, then model how that changed pattern of prices affects economic choices. The last step from that is to go from those changed economic choices to figure out the welfare gain.

In the case of Treasury's PRISMOD modelling, it does not go beyond the effect of a tax system on prices, so you cannot get an estimate of the welfare gain from that. In the case of the Monash model, as you will see, it does not model the old and new tax systems in detail. It relies on Treasury's estimates of the price effects of the changes. Only Econtech's MM303 model goes through all of the steps, starting with the old and new tax systems and working through the effects on prices, through that to economic choices and through that to the welfare gain.

What has been modelled in ANTS? We went through this last week. Basically, we have a GST, with a rate of 10 per cent, in 1996-97 terms, giving a total benefit to the government's budget of $25 billion. Of that, $20 billion is used to reduce the existing taxes on goods and services, particularly sales tax, but also bank account taxes, business stamp duties and the reduction in diesel excise.

CHAIR—You can assume we have a nodding acquaintance with ANTS.

Mr Murphy—Okay. The remaining $5 billion is the contribution to the cutting of income tax—that is, the income tax switch. On the economic modelling, firstly, I will give you a bit of background on the ORANI Monash model. The original ORANI model was documented in a book, which is fine reading, by Professor Dixon and others, that came out in 1982. It is a computable general equilibrium model, with a particular focus on international trade. The Monash model is, essentially, a further development of the ORANI model, which looks at the dynamic adjustment of the economy.

In the Monash report, results are presented for the first eight years following the introduction of ANTS. The adjustment of the economy that Monash takes into account is adjustment of wages and capital, following a disturbance to the economic system. Other sorts of economic variables, Monash assumes, adjust to their new equilibrium positions straightaway.

In terms of how you would think about the Monash results, by the time we have got to the end of the figures that are presented, which is year 8, for most variables we are reasonably close to seeing the full response to ANTS—not for all variables. That is worth bearing in mind. So the results for year 8 provide a guide to the likely long-term effects of ANTS. The results for the first seven years give you some indication as to how we are likely to get to that long-run position.

One point about the ORANI model and also the Monash model is that it does have limited detail on the indirect tax side. Existing indirect taxes are rolled into just three categories. Sales tax and bank account taxes, for example, which are part of ANTS, are rolled into a much broader category. Similarly, Monash does not have a GST as such.

That means it is not possible directly to model the change from the old to the new tax system using Monash. Instead, the Monash modellers have relied on Treasury's estimates of the price changes due to ANTS and work backwards to try and figure out what adjustments they need to make to the summary tax measures in their model to generate the same kinds of price changes. This is a limitation of the modelling, but it does not mean the modelling is invalid. What it means is that the modelling of the change to the tax system with Monash is somewhat approximate.

MM303 was developed in the second half of 1997 under contract to a state treasury. It is a computable general equilibrium model similar to the ORANI model. In many ways it is a model of long-run outcomes. In developing MM303, all of the equations were developed from scratch, but some of the ideas in the model do reflect ideas in the ORANI model. In particular, the way international trade is modelled has a lot of similarities with how it is modelled in the ORANI model. The particular focus of MM303 though is to include the structure that you need to get a reliable estimate of the welfare gain from indirect tax reform, such as in ANTS.

As I mentioned previously, this modelling assumes that national employment is fixed. It does not give results and what the tax package does to national employment is that it assumes that it is fixed. Really, the same assumption is made in the long run in the Monash modelling as well. If you look at the Monash model results for year 8, you will see that invariably national employment is close to being back to its original position. In the Monash simulations and in the MM303 simulations, you will see that in the long run, the effects of ANTS on national employment are neutral. That is really an assumption, not a result.

For the last year MM303 has been used in a wide range of projects looking at the effects of indirect tax reform in ANTS. In terms of what the model actually does: you feed in the changes from the old to the new tax system; the model figures out how that changes prices; how those price changes then effect economic decisions; and how those changed economic decisions effect national economic welfare. As I mentioned previously, it does not give any information on equity, that is, how each individual household is affected, for example.

One crucial issue is how will the changes in prices due to ANTS affect choices in the economy. These CGE models allow for a wide range of economic choices to be affected by prices. But there are four of particular relevance in MM303 in terms of modelling ANTS. The first is as I discussed last time, that ANTS will change relative prices of broad categories of consumption: the overall price of food, for example, will go up; the overall price of cars will go down. That will lead to changed economic choices in the economy—those sorts of changes. That is taken into account both in the Monash model and in MM303.

There are also changes to relative prices within broad consumption groups. For example, within the category of fares, international air travel will become cheaper, bus and taxi fares will go up slightly and rail fares will go up by more. These changes in fares will lead to changing patterns of passenger transport through substitution effects within the fares group.

That kind of substitution effect is also allowed for in MM303, but not really in the Monash model, except in a very limited sense. In the Monash model, people think of a bus trip as being no more closely substitutable for a train trip, for example, than it is for drinking beer. They think of drinking beer as being no more closely substitutable for drinking wine than it is for taking a bus trip.

When you put it that way, that does not sound particularly plausible. That is the reason why in MM303 we allow for this second level of substitution. Substitution between different alcoholic beverages, for example, is one consumption group; substitution between different modes of passenger transport is another consumption group. So we are allowing for more behavioural responses to ANTS in MM303 compared with Monash.

Another important area where ANTS will affect economic choices is the choice businesses make between labour and capital. Capital will become cheaper, particularly as a result of lower prices for motor vehicles, but also because of lower prices for computers and office equipment. This will lead firms to adopt more capital intensive methods of production. This point is taken into account in both Monash and MM303, although in MM303 the response is larger. Monash assumes an elasticity substitution between capital and labour of 0.5; MM303 assumes 0.75. The 0.75 estimate is preferable and consistent with our own econometric research.

There is also another issue. Because the price of motor vehicles is reduced more than the price of buildings, ANTS will also affect the composition of business capital. Business will tend to rely more on motor vehicles and less on buildings than they would in the absence of ANTS. So there will be a change in the composition of the nation's capital stock. This is allowed for in MM303, but not in Monash. Monash does not allow for any substitution between different types of capital. What this all boils down to is that, of the four types of changes to economic choices that one would expect as a result of ANTS that are allowed for in MM303, two of those also appear in Monash but not the other two. For that reason, MM303 will tend to give a higher estimate of the welfare gain from ANTS. I would say that is because Monash is understating the behavioural responses to ANTS, because it does not have the other two avenues of choice represented in it.

You can in fact argue there are also other ways in which ANTS is likely effect economic choices that even MM303 does not take into account. For example, MM303 assumes that businesses largely do not have choices between recurrent inputs. They have to use those essentially in fixed proportions, whereas in fact in some areas they do have choices between recurrent inputs.

Also, and perhaps most importantly, households have a choice between work and leisure. ANTS does reduce effective marginal tax rates, both by reducing actual marginal tax rates and also by extending the tapers on certain social security benefits. These reduced marginal effective tax rates should encourage labour supply leading to sustained gains in employment. That effect is also not taken into account in either model.

To bring all of these ideas together in comparing the various models, MM303 like Treasury's PRISMOD model distinguishes 24 different categories of indirect taxes; Monash distinguishes three. MM303 and PRISMOD have very detailed modelling of how the GST applies across the economy and you can vary good by good whether something is taxable, input taxed or GST free. Monash does not have any of that detail. As I said before, these first two points mean that, necessarily, their modelling of ANTS in Monash is somewhat more approximate than it is in the other two models. But it still can provide some guide to the likely economic effects of ANTS.

In terms of the key economic choices I have identified which you would expect to be influenced by ANTS, PRISMOD does not allow for any of those behavioural responses. Monash allows for two out of the six; MM303 allows for four out of the six. What that means is that even MM303 will understate the welfare gain from ANTS, but Monash will understate it by more.

Another issue which is fairly technical, which I am not going to try and explain until a bit later on, relates to the response of export prices to ANTS. The modelling shows that ANTS will lead to an expansion in the volume of exports. The issue arises that, if Australia is trying to sell increased volume of exports on world markets, to what extent will it need to accept a cut in prices to be able to achieve that?

MM303 largely adopts ORANI type assumptions in that area which imply that the export price reductions are fairly modest. These are the assumptions which have been used in the ORANI and Monash model from 1982 through to 1997. I think for long-term analysis though these assumptions are realistic. Australia is basically a small fish in a large pond.

With the Monash model though, although it is not reported in the Monash paper, recently they have substantially increased the assumptions made in this area. The effect of this is that, as export volumes expand as a result of ANTS in the Monash model now, that leads to considerably greater falls in export prices which is, of course, a cost to the Australian economy. So this change in the export price sensitivity in Monash, which has been made quite recently and not reported in the paper, as you will see has a big impact on the Monash model results.

Senator MURRAY—I am sorry, just a point of clarification. Is that the new trade elasticities you are referring to?

Mr Murphy—Yes. The next issue is the level of detail of the models. PRISMOD and Monash distinguish around 100 different goods and services; MM303 distinguishes 305. This extra level of detail helps in picking up the unevenness of the existing tax system better, and hence gets a better estimate of the gains from evening the tax system up through a broad based consumption tax such as a GST.

Because MM303 has more detail in this area than Monash, it will give a higher estimate of the gain, but still in principle a conservative estimate. In principle, the more disaggregated the better in terms of getting an estimate of the gain. For example, if you had a model with only one good or service you would not get any gain at all.

The final issue was, having figured out how ANTS affects economic choices, how do you go about measuring the impact of that on consumer welfare and the gain to the country? In MM303 we have spent quite a bit of time developing the correct formula to measure the exact gain in economic welfare. It is not a relevant issue for PRISMOD because they do not model behaviour responses to ANTS anyway.

The Monash report includes the formula that they have used to measure the gain. The formula in the report is an approximation. It is the sort of approximation that is fairly widely used, but it is nevertheless an approximation. In the draft, which you received on Friday or Saturday, I have stated that that approximation gives an overestimate of the gain, and the formula as stated in the paper does that. However, in conversations with Peter Dixon on Saturday, it transpired that the formula that Monash have actually used is slightly different from the formula in the paper. There is no deliberate misleading here. It is simply that the formula in the paper has been reported somewhat casually. When you take the formula that Monash have actually used, it in fact gives an underestimate of the gain. In fact, we know with certainty that it gives an underestimate of the gain.

There is also a cousin to this formula that is known with certainty to give an overestimate of the gain. If they were going to present an underestimate, they should have presented an overestimate as well, so that the reader could gauge in what range the gain actually falls. In fact they have only reported one estimate, which is an underestimate, and in the paper they have not actually noted that it is underestimate, which is the limitation of the paper. In the case of MM303 we have actually reported the exact estimate. On the equity issue, only PRISMOD identifies lots of different types of households, so only PRISMOD can say something about equity.

In terms of time frames, MM303 is a long-run model. It can only tell you the effects of ANTS after everything has settled down. Monash is an annual model, so it can give you some insights into the likely time path of the economy following the introduction of ANTS, its adjustment to that long-run position. That is something that Monash can do that MM303 cannot.

I will quickly summarise the implications of what I have said so far. To me this means the following: MM303 can provide you with an estimate of the efficiency gain from ANTS. It is still a conservative estimate, but I think it is the best estimate available. PRISMOD cannot because there are no behavioural responses to ANTS in the PRISMOD model. Monash can provide you with an estimate, but in a series of areas—as I have just suggested and we will see more detail in a moment—it is not as well equipped to provide an estimate as MM303.

On the other hand when it comes to equity, if you had a choice between those three models, you would have to look at PRISMOD. The models cannot help you with simplicity, and if you are interested in looking at the transition costs of ANTS, you would need to look at Monash because the other two models do not deal with the transition.

I will move on to the effects of ANTS at the national level. According to Econtech, the long-run effect on the CPI is 0.9. That is not the estimate of the effect in the first year; it is the long-run effect. The figure underlying the Monash modelling is 2.2. However, that is not a result of the Monash modelling. As I mentioned, the Monash modelling gets its price effects from PRISMOD. So that 2.2 figure simply reflects bringing in the consumer price estimates of PRISMOD and recalculating the CPI on a Monash basis, which is presumably the reason why their CPI number is slightly different from the Treasury's 1.9.

In terms of the effect on the cost of business capital, the Econtech estimate is that there would be a fall of 8.5 per cent. The Monash estimate is that there will be a fall of seven per cent. Again, that estimate is taken from the Treasury document, however, it is based on a misreading of the Treasury document. The Treasury document gives a figure for the fall in the price of private investment of seven per cent. In that context, private investment actually includes housing investment, which as we know goes up in price.

So the minus seven per cent in the Treasury document would actually be consistent with about a 10 per cent fall in the cost of private business investment and a rise of about five per cent in the cost of housing investment. When you also take into account what happens to investment by public enterprises, the answer you get as the correct cost reduction for the cost of business capital is about 8.5, not seven as in the Monash modelling.

The effect on house prices that comes straight out of the MM303 model is six per cent. Since there has been some confusion on this topic I should clear this up, as I have done some work for the HIA in this area. The figure that comes straight out of the model is six per cent. The model, however, does not include raw land. ANTS does not effect the cost of raw land which makes up part of the cost of a house and land package. Once you allow for that, the effect on the cost of a house and land package would be 5.1 per cent. Instead of the increase in house prices flowing through to an increase in rents of around 3.8 per cent, it actually flows through to an increase in rents of 3.1 per cent, once you allow for the fact that the price of the raw land component does not go up.

The HIA submission also includes an estimate of eight per cent, I understand, for the short-run impact on house prices. That is not an Econtech estimate; that is a HIA estimate. In order to clear these issues up properly, the HIA have done the right thing and attached a copy of the Econtech work which we did for the HIA. If you wanted to identify the Econtech estimates, you can consult the Econtech report in the back of the submission.

In terms of effects on national accounting aggregates, the Econtech estimate is a gain in private consumption of O.5 per cent. The Monash estimate is minus 0.3. In the case of Econtech it is long run; in the case of Monash it is year 8, which is a guide to the long run. We do not have strict long-run estimates available for Monash.

There seem to be two main reasons for this difference. One reason is that private consumption is closely related to the concept of consumer welfare and, as you will see, Monash gives a lower estimate for the gain in consumer welfare. We will come back to that issue. I have already alluded to that a fair bit. The other is just a technical reason that is explained in the Monash report—that its estimates of consumption in GDP are affected by these share effects. These share effects, while they do reduce the reported gains in consumption in GDP, are not actually of economic significance in judging whether we are getting a positive outcome from ANTS.

That means that the figures for private consumption in GDP understate what the Monash model is really saying about whether ANTS is good or bad for the economy. That is because of these share effects as explained in the Monash report. But, in any case, the key issue here is the effect on consumer welfare, which I will be returning to.

Econtech estimates a long-term gain in business investment of seven per cent. For Monash, the figure is 2.8 per cent. There are a number of reasons for this difference. One reason is the understatement that I have already referred to in Monash of the reduction in the cost of business investment, because in the Monash model the cost of business investment is not going down by as much as it should, so you are not getting as big a response in the volume of business investment.

Another reason is that, in Monash, the choice between capital and labour is less sensitive to these kinds of price changes. I mentioned before it gives an elasticity of 0.5 as against 0.75 in MM303. There is also a series of other reasons that are listed in the report, which I do not think I need to delay you with. I guess the bottom line is I think the Econtech estimate is the more reliable one. If that is an issue that comes up, perhaps we should come back to it.

Both models agree that long-term effect on residential investment is about 2½. For exports, the Econtech figure is six; the Monash figure is one. Partly this relates back to the business investment results, partly it relates to the export trade elasticity changes which I will explain more in a minute. In other words, if Monash had used their old trade elasticities, they would have got a bigger export response. Part of it is that Monash holds fixed the capital stock in the oil and gas industry. So it is assuming that the oil and gas industry cannot respond to lower prices in investment goods. Part of the reason is that the year 8 results are not the long-run results. If you ran the Monash model out a few more years, that export gain would get larger. The GDP gain is lower in Monash. Again, that is partly associated with its more muted business investment response—partly its lower welfare gain, partly the share effects.

In regard to other national effects, according to MM303, ANTS will lead to an appreciation of the exchange rate of four per cent. Monash says 1.2 per cent. Monash, remember, takes the cost reductions and price reductions from the Treasury's modelling. According to the Treasury, ANTS will reduce production costs across the economy by an average of 3.2 per cent. So that would represent an improvement in international competitiveness. If that is being balanced out by the exchange rate, you would expect the exchange rate to appreciate by three per cent. So it seems to me that the Monash result that the exchange rate appreciates by only one per cent is a bit curious. I think this may be a case where using year 8 results is a somewhat misleading guide to long-term outcomes. I think if the model was run out longer, the exchange rate response may well be greater.

The key issue is the effect on annual economic welfare. The Econtech estimate is a gain of $607 million. The Monash estimate is a loss of $30 million. I will be explaining the reason for those differences in those estimates in some detail shortly.

In terms of the impact on real after tax wages in the long term, Econtech is estimating a gain of 1.8 per cent; Monash, a gain of 1.0 per cent. This again partly gets back to different assumptions made across a series of areas. There is a lot of information in the paper which varies these assumptions to enable you to determine what are the differences for those figures. But, broadly, I would be saying that the Econtech estimate is the preferable one for the sorts of reasons we have already been discussing.

The long-term effect of ANTS on the CPI we discussed last week. Just to summarise in simple terms, the tax mix switch in ANTS would suggest a CPI effect of about two per cent—it is a fairly limited tax mix switch. But, then, if you will allow for the additional cost savings that you would expect from firms changing their production methods to take advantage of the fact that some of their costs or their inputs have fallen in price more than other inputs, then that would provide an additional cost saving that is not allowed for in the PRISMOD modelling. Hence, we get a long-term reduction in the CPI of only one per cent, but that is a long-term figure.

If you look at the figuring in ANTS, the tax mix switch in 1996-97 terms is about $5 million. That is the switch from taxing income to taxing consumption. An extra $5 million on consumption is worth about two per cent. So you would expect the price of consumption to go up by about two per cent on the basis of imposing an additional $5 billion tax on it.

However, ANTS reduces the costs of some business inputs more than others, so you would expect business to respond to that by changing their methods of production to take advantage of the fact that some inputs have fallen in price more than others, providing an additional cost saving. That additional cost saving is not allowed for in the Treasury figuring because the Treasury figuring assumes all economic choices are fixed. It is that additional cost saving which brings the CPI effect in the long run down to one per cent rather than two per cent.

That is as best as I can figure the difference, mind you. The only way of being absolutely sure of the full details of the reasons between the two estimates would be to sit down with Treasury and to go through all of their numbers and I could pull up my numbers, but I have not had the opportunity to do that. But that is certainly an explanation of why the figures would be different.

In terms of industry effects, the consumer price effects first of all, my modelling shows an all up rise in the CPI of 0.9 but, as we saw last time, there is quite a bit of variation around that between different broad consumption categories. Again the Monash model does not provide any independent information on this subject because they are using Treasury estimates of the effects on costs and prices. That is why these charts only show the Econtech estimates.

One issue that came up last time was my estimate that the effect on food prices was three per cent against, I think it was said, the Treasury estimate of about 4½. I have included a section in my paper, section 8, which goes through the very detailed comparison of how my figures are made up compared to how Treasury's figures made up, and there is some discussion there of the possible reasons for the differences. I think rather than going through that now, I am happy to do that in response to questions if anyone wants to raise that.

CHAIR—Can you speed up your presentation at all, Mr Murphy. I am conscious of the time, that is all.

Mr Murphy—Sure. So household appliances fall seven per cent in price as sales tax is removed from those, but gas and electricity are up five. The price of motor vehicles is down 11 with the removal of sales tax there. The cost of financial services is down eight with the removal of bank account taxes and business stamp duties. They are the most striking price changes.

Moving on to the effects on output in different industry sectors, you will recall that the MM303 estimate is that there will be a long-term gain in GDP of 1.8 per cent against the Monash figure of 0.2 per cent. But in both models there is quite a bit of variation around that between different industries, and I have included in the report various charts on that. However, one comforting thing is that the broad pattern of industry effects is reasonably similar across the two models. So both models are saying broadly the same story about how the industry pattern of economic activity in the economy will be affected by ANTS. You can see that from the two pictures.

There are two differences perhaps that stand out most. One is in the area of mining where there is a gain in MM303 of seven per cent against Monash of two per cent. Part of the explanation here is that the Monash results are figure 8—their gain in mining is still clearly increasing at the end. I do not know what their final figure would be. I would guess three or four per cent. Part of the reason they do not get to seven would be these new trade elasticities, and that is probably the main reason. There are several other reasons listed in the paper which I will not delay you with now.

Another interesting difference is accommodation, cafes and restaurants. Econtech's estimate is that there will be an output loss of two per cent whereas the Monash figure is five per cent. Which figure is right? The Econtech figure is right. You were probably expecting me to say that, but this one is cut and dried. The reason Monash is saying five per cent is that they are running off Treasury's estimates of the consumer price effects of ANTS. Treasury's estimate is that the price of accommodation, cafes and restaurants will go up by 6.7 per cent. However, there is a mistake in the Treasury calculations which is explained in section 8 of my report.

When you remove the effects of that mistake, the increase in the cost of accommodation, cafes and restaurants is only about four per cent. Relative to the increase in the CPI of about two per cent, therefore, that is a real increase of two per cent in the price of accommodation, cafes and restaurants, not four per cent. Because Monash is working with the Treasury number with the four per cent increase, they are getting a much bigger response to that. Shall I explain the problem with the Treasury number?

CHAIR—Mr Murphy, we started at about 8.20 a.m. and you have now been going for 45 minutes without being interrupted. We have only got three hours and I do want to provide Professor Dixon with an opportunity to respond, and the committee wishes to pursue all those questions that we have been sitting on.

The purpose of this interjection from the Chair, Mr Murphy, is simply to draw attention to the fact that I am getting nervous about the amount of time and whether we will be able to complete the task we have set ourselves. If we have to finish the hearing today without completing the hearing, it does mean the reporting date is in jeopardy. I have been trying desperately to balance the need for the committee to discharge its responsibilities to the Senate fully and properly and conscientiously against the need to do it within the time frame, which as a knock-on effect imposes a time frame on everyone, including presenters.

Mr Murphy—I want to be as helpful as possible.

Senator MURRAY—I suspect that all committee members have read the report, at least to page 37.

CHAIR—That is right. A lot of the presentation up until now has been telling us what we have already read, so if you could come to the business part of the report, the part we have not read, and your recommendations, I would appreciate that.

Senator FERGUSON—Mr Chairman, Mr Murphy has prepared a presentation for us and, as you said earlier, it is important to get the full detail of the review. I think anything that we cut out makes it more difficult for us to make some assumptions. There are some people who only received the first 36 pages this morning.

Senator GIBSON—I did not get that—

Senator SHERRY—The whole process is outrageous.

CHAIR—Order! We are not going to debate this now. I have asked as I have indicated and unless someone is going to gainsay me, I put that request to Mr Murphy.

Mr Murphy—I will be as speedy as I can, Mr Chairman.

CHAIR—Thank you.

Mr Murphy—I will explain that point about accommodation, cafes and restaurants and move on from the industry effects. This is something I figured out from looking at the Treasury numbers and comparing them with mine. ANTS, as you may know, includes a reduction in state gambling taxes to balance out the GST on gambling. Treasury has put all of that reduction in state gambling taxes in the sports and gambling industry.

However, about half the gambling industry is contained in accommodation, cafes and restaurants. It includes gambling in clubs and hotels. So they should have put half that reduction in gambling taxes in accommodation, cafes and restaurants. When you do that then the estimate of the price gain goes back from about six per cent to about four per cent. Similarly, that means they have overstated the price reduction in sports and gambling because they have put all of the reduction in state gambling tax there, not half of it.

An issue that was raised last time in a number of questions was the employment effects of ANTS, so I have gone to some trouble to include a six-page section in my report which discusses that in some detail. This chart is a bit difficult to read, unfortunately, but if you look at chart 3 on page 27 of the report you will find it there.

The first point to make is that these are employment shifts. The assumption is unchanged national employment. You can see that the biggest employment gain is in manufacturing, of 12,000. This includes 6,000 jobs in the car industry, with the abolition of sales tax on cars, and it includes 4,000 in electronic equipment manufacturing for the same reason—the sales tax comes off electronic equipment manufacturing.

On the other side of the ledger, there is a reduction of 8,000 in culture and recreation, reflecting the increase in the level of tax on culture and recreation. However, in broad terms, what is going on here is that the industry pattern of taxes is being evened up: taxes are being moved away from industries that were highly taxed in the past towards industries that were lowly taxed. That is causing employment shifts away from the industries that were—

Senator CONROY—That is economic jargon for job losses.

Senator FERGUSON—We are having interruptions now, are we?

Senator CONROY—Employment shift is the same as job loss.

Senator FERGUSON—You cannot contain yourself, Senator.

Senator O'CHEE—You have got to excuse him—the excitement of waiting for his Nobel prize in economics is getting too much.

CHAIR—Order! The committee will come to order. I said earlier that we will not take questions during this phase. Of course some senators have chosen to ask questions and I have been benign about it, but if we are going to get into a question session I will crack down on the rules. I have allowed one or two questions from this side; I do not see why, in terms of fairness, I cannot allow one here. But please proceed, Mr Murphy, and, if you would, answer that question as you go.

Senator FERGUSON—Senator Conroy's was not a question.

Mr Murphy—What the chart factually shows is job losses in some industries exactly balanced by job gains in others. I have characterised that as employment shift. The interpretation of what is happening is, as I said, that this is mainly a behavioural response to an evening out of the tax burden between industries. These behavioural responses, the shift in jobs away from industries that were lightly taxed towards industries that were heavily taxed, is the main source of the consumer welfare gains from ANTS. The main issue in fact is whether this policy adds or subtracts from consumer welfare.

A balanced way of looking at this is that it is a triangle, if you like. There are jobs moving away from sectors that were lightly taxed before and are now being taxed more on the same footing as other sectors towards sectors that were overtaxed before and are now being put more on the same footing as other sectors. That job shift is causing a welfare gain. As long as you think of the three different points of the triangle, not just one point on the triangle, I think you are getting a full and balanced picture of what is actually occurring.

What is this welfare gain? I think that is the main issue. According to MM303 it is $607 million; according to Monash it is minus $30 million. This is the annual gain in consumer welfare. So it is not a gain that only occurs in one year; it is a gain that is sustained indefinitely.

Senator CONROY—What is that as a percentage?

Mr Murphy—That is about 0.2 per cent of consumption. There are five issues which account for the difference between these two estimates. Three of these issues are fairly clear just from reading the Monash report versus looking at our economic modelling. Two of the issues only surfaced during the current week, and neither of those issues are, if you like, declared in the Monash report. That is a significant reason why I have provided the report to the committee later than I would have liked, that there are two issues that are, if you like, buried in the Monash report.

What are these five issues? Firstly, there is the issue of the modelling of the existing and new tax systems. As I have mentioned, Monash identifies only three categories of existing indirect taxes and does not have a GST. MM303 has 24 categories of existing indirect taxes and does have a GST, so it is more accurately modelling the tax changes in ANTS; it is more accurately picking up the uniformity, in particular, in the new tax system; and, because of that, it is likely to produce a higher estimate of the welfare gain. In the time available I have not been able to figure out what that is worth in terms of the welfare gain estimate. That would be quite a complicated exercise. The point I would note, though, is that the Monash report does make the observation that the modelling of a tax system in MM303 is impressive.

The second issue is economic choices. As I stated before, of the six economic choices that you might expect to change from ANTS, two are picked up in the Monash model and four in MM303. The treatment of economic choices in MM303 the Monash report again states is impressive. That issue I have been able to investigate. I have been able to identify what that is worth in terms of the welfare gain estimate.

The third issue is this export price responsiveness issue. This is the point that the Monash estimates, I think some time in the last 12 months, for the export price responsiveness parameters have been substantially changed, though this is not reported in the paper, and that has considerably reduced the Monash estimate of the welfare gain. That issue I have been able to get to the bottom of, with some additional simulations which were only run quite recently because I only became aware of this change in the Monash elasticities when I asked for the new set of elasticities because I was not able to explain the differences in the welfare gain estimates by taking into account what I could see in the paper.

The fourth issue is the measurement of the gain. This is the point I referred to previously—that we know for certain that the measure used by Monash understates the welfare gain; it is an approximation that understates the welfare gain. I think I have also been able to get to the bottom of that issue.

The fifth issue is the level of commodity disaggregation in the two models: Monash with 113, MM303 with 305. Again, the Monash report says that the commodity disaggregation in MM303 is impressive. This, you would expect, would also give rise to a higher estimate of the welfare gain because, as I said before, you are better picking up the unevenness in the tax system. But in the time available I have not been able to estimate what that is worth. However, it turns out the three things that I have been able to estimate what they are worth turn out to explain quite a lot—probably most of the difference between the estimates of the gains, if not all.

So let us go through the difference issues. The first one was the wider range of economic choices that are allowed for in MM303. MM303 estimated the welfare gain is $607 million. If we change our estimate of the tourism export elasticities to that used in the Monash model, which involves increasing it from two to three—which is actually not changing economic choices that the other ones are—that reduces our estimate of the welfare gain to $557 million. Tourism industry experts say this elasticity is no more than two. Econtech's own econometric estimate of it is two. So I think the value in the Monash model for this elasticity is too high. For that reason I think the $607 million estimate is to be preferred to the $557 million estimate.

The elasticity substitution between capital and labour was 0.75 in MM303 but only 0.5 in Monash. If I switch to 0.5, that puts my estimate of the welfare gain down to $530 million. Again, my own econometric estimate of this elasticity is 0.75. The original book on the ORANI model refers to 0.5 as a short-run value and 1 as a long-run value. Since we are looking at the long run here, going out eight years or more, 0.75 seems to me to be certainly not unreasonably high.

The next issue is that Monash does not allow for the choice that businesses have between different types of capital; it assumes that composition of their capital is fixed. If we take MM303 and make that assumption, that reduces our estimate of the welfare gain to $468 million.

The next thing, as I said before, is that Monash does not allow for this second layer of decision making by consumers: choices between the alcoholic beverages group, for example, between different forms of alcohol; choices within the fares group between different modes of passenger transport; and so on. MM303 does; if you take that out of MM303, the estimate of the welfare gain drops to $378 million. So, by restricting economic choice in this way in the MM303 model, our estimate of the welfare gain goes down from $607 million to $378 million—a drop of $229 million. This explains a noticeable part of the differences in the estimates of the welfare gains between the two models.

Basically what I am trying to do is to change assumptions in MM303 to make them more like Monash to understand where the Monash results are coming from. What this demonstrates is that $229 million of the difference between the estimates is because the Monash model is overly restrictive in its economic choices. That is not really a criticism of the Monash model as such. For a wide range of purposes that would not matter, but for the particular purpose of estimating the welfare gain from this type of tax reform it does matter.

CHAIR—Are you able to complete within the next few minutes?

Mr Murphy—Could I have until 9.30?

CHAIR—Yes.

Mr Murphy—The next issue is the export price responsiveness. As I said, the Monash model does not mention that the assumptions in this area have changed, but when I got to this point I got a figure of $378 million, which is still well in excess of the Monash estimate of minus $30 million. I thought there must be something more. So I asked for some more information from Monash, including the export demand elasticities and was surprised to find they had changed very considerably. I put the new export demand elasticities through MM303 and the estimate of welfare gain dropped to minus $307 million. This change took $680 million off the estimate of the welfare gain and this change is not recorded in, as I said, the Monash paper.

So what are we to make of this change? The first point is that from 1982 to 1997 these export elasticities in Monash were pretty much unchanged. The typical response parameter was 0.05. What that means is, if you increase the volume of the category of export by one per cent, to sell that extra one per cent you have to accept a price reduction of 0.05 per cent. That was the assumption that was used in the Monash model over that period of time.

Now the typical response parameter is 0.25. In the typical case the export price reduction is now five times what it was before, and that represents a cost of expanding export volumes. As I said, this change is not noted in the Monash report. I think it should have been.

The next issue though was: is this a change for the better or the worse in the Monash model? In my view this change was made as a device to deal with a known congenital problem with CGE models. This is the so-called overspecialisation problem. It was not made because the Monash modellers actually thought the new values are more appropriate. But as these figures show, this change, while it might help deal with the overspecialisation problem, compromises the estimate of the welfare gain.

MM303 uses a different device to overcome the overspecialisation problem. It introduces some inflexibility in export production, and this device does not affect the estimate of the welfare gain. So, for the purposes of knowing what the welfare gain from ANTS is, it is preferable to use the MM303 device for dealing with the overspecialisation problem, not the Monash device.

What if Monash had used these new elasticities in the past? How would that have changed the findings? Many of you will be familiar with the car tariff inquiry where Monash modelled the effects of car tariffs being reduced from 15 per cent to five per cent. At the time Monash estimated finally that the gain from this would be $75 million, though their initial estimate was $1,500 million, but that is another story about making different labour market assumptions. The $75 million, incidentally, they characterised as representing a considerable benefit; a welfare gain of $75 million was a considerable benefit.

I have run the same tariff reduction with MM303 and I get a $40 million gain, and that can be explained by slight differences between the models. I then took the new Monash trade elasticities and put that through. That reduced the estimate of the welfare gain to minus $299 million. If Monash had used their new trade elasticities in the car inquiry, they would have found a very large welfare loss from reducing car tariffs from 15 per cent to five per cent—an implausible result. In fact, you can show that, with an export price response parameter of 0.25, it is optimal to have tariffs of 33⅓ per cent. There are no further gains from cutting tariffs once you get to 33⅓ per cent.

Virtually every economist in the country would disagree with that. That tells you one thing in particular, that the new Monash trade elasticities are not plausible. If we use the old Monash trade elasticities, we would have concluded that cutting car tariffs gives you a welfare gain; we also would have concluded that ANTS gives you a welfare gain. We are now only getting the conclusion that car tariffs give a welfare loss and ANTS does not give a welfare gain, because those trade elasticities have been changed in an implausible way.

The last issue is the measurement of the gain. The MM303 estimate was $607 million. If we remove the assumption that there are justifications for some special taxes—and I am doing that just to make these comparisons—that puts it up to $714 million. I am not suggestion $714 million is the right figure. What if we used the formula that Monash have used, the underestimate formula? We would have got $227 million rather than $714 million, which is the exact estimate. This underestimate approximation gives you an understatement of nearly $500 million in the case of the MM303 results. If we had used the overestimate approximation, we would have got $1,226 million. So you can see the approximation formula used in the Monash report is really quite misleading and, given that they are using the underestimate approximation, it is substantially underestimating the welfare gain.

I had discussions with Peter Dixon about this on Saturday and he re-ran the Monash simulations, this time finding both the underestimate and overestimate. From his results he says that the underestimate and overestimate are only about $250 million apart, which suggests his underestimates are about $100 million to $150 million. That puzzles me slightly since it makes so much difference in the MM303 results. I would accept that the underestimation would be less in his results because there is less action, so to speak.

So what do we draw from all of this? The Monash estimate is lower for five reasons: first, Monash has less economic choice; second, it has greater export price responsive to the expansion in export trade volumes; third, it has a downward bias in its measure of the welfare gain; and all of the effects of those three factors have quantified. There are other issues such as it has less commodities aggregation and, of course, the treatment of existing and new tax systems. The simple answer to all of that, of course, is to use the MM303 estimate.

Since I am just about out of time, as for making food GST free, I have simulated that as well, as has Monash. The conclusion I have reached is that the efficiency of that is neutral to slightly negative. The effect on simplicity is negative. The effect on equity is positive, but it is better to leave food in because the equity objective would be more efficiently met through income tax and social security measures.

Making tour packages GST free is negative for efficiency. There are several pages in my report explaining why that is the case. It cuts the welfare gain from $607 million to $504 million. It is a bad idea, but also it does not do anything to reduce the degree of job shifting in the economy.

In terms of managing the transition, some of these issues were discussed last time. The short-term jobs gain in the Monash central simulation of 30,000 is in the right ballpark. The wages blow-out scenarios which represent two out of the seven Monash simulations are quite implausible. This is a favourable labour market shock which gives higher after tax real wages. There is no reason why it would be accompanied by a wages blow-out.

In terms of the efficiency gain, the annual welfare gain of $600 million is conservative. It only allows for four of the six economic choice effects. Also—a point I have not mentioned yet—it does not pick up well the gain from removing bank account taxes and business stamp duties. These are very specific distortions in the economy, and it is hard to measure the efficiency costs of those distortions with a general economy wide model.

I discussed the simplicity issue last time. We cannot look at equity with these models. The findings you will find at the back of the report. This will be Ross Gittins' finding, I suppose. This is a quote from him back in 1992. It is not my finding; it is his. I just put that up for its amusement value. I think I have run through the main points I want to make. The findings you can find in the last three pages of my report. That is what I was going to run through now, but my time is up.

CHAIR—I was going to cut to questions now, but in view of the hour, I wonder if it is appropriate we hear from Professor Dixon and then take all the questions. We will break for five minutes.

Proceedings suspended from 9.31 a.m. to 9.37 a.m.

CHAIR—The meeting will come to order. I welcome Professor Dixon to the witness table and I invite you to comment on the presentation we have just received, or matters related thereto.

Prof. Dixon—I thought the most important thing that came out of this review, which was generally highly critical of the work that we did at the Centre of Policy Studies, was that it failed in any way to challenge any of our major conclusions. I will run you through those.

Overhead transparencies were then shown—

Prof. Dixon—In the long run, we concluded that the package as outlined by the government would be damaging to tourism. I think that was agreed by Econtech. We said it would be damaging to education exports. Econtech was silent on that issue. We said that there would be gains to traditional exporters, especially mining, and that was agreed. We said there would be mixed effects for consumer goods industries—some would go up, some down. Clothing, footwear and beer would go down; electronic equipment, computers and cars would go up. All these things were agreed.

We said there would be a long-run increase in the capital stock. In other words, the economy would operate with a higher capital labour ratio. That was agreed. We pointed out that that was not necessarily of benefit to the economy; it was just a structural change that would happen. We argued that there would be a decline in the terms of trade. That was agreed. We assumed that there would be no long-run change in employment and that was a common assumption. We found that there would be little change in economic welfare in the long run. After everything had settled down, there would be little change in economic welfare. Our number was as close as you could get to zero; Murphy's number is 0.2 or 0.3 per cent plus.

Senator CONROY—It is going backwards. It has gone from 0.3 down to—

Senator FERGUSON—Are we going to have interruptions, Mr Chairman?

CHAIR—Order! No, we are not.

Prof. Dixon—As Murphy showed, as he changed the terms of trade, as he changed the export demand elasticities, you can twist that number from being a small plus, which is the number that was reported by Econtech, to being a small minus, the $300 million minus number, the $600 million plus number. These are tiny percentages which should be taken into account.

Murphy pointed out that we once described $75 million as a substantial gain. True, he quotes us correctly, but that was for a tiny policy change. There we were talking about changing one tariff, an administratively very easy thing to do. We were not talking about reforming the entire tax system of the country, we were talking about changing one tariff. So getting $75 million a year for a tiny change in economic policy seemed like a reasonable thing to do.

Looking at slide 2, here we go to the short run. Murphy modelling does not do short run so none of the Monash short-run conclusions were challenged by Murphy's modelling. The employment boost of 30,000 jobs was described as being in the right ballpark, but remember that is 30,000 jobs under ideal labour market conditions, that is, the labour conditions in which wage earners accept the cut in income taxes as compensation for the jump in the CPI.

It should also be emphasised that that 30,000 jobs gain is not really anything to do with the GST, that is to do with the fiscal expansion that is involved in the package. The employment gain could be had simply by cutting income taxes, and you do not need to reform the indirect tax system for that.

Under less ideal labour market conditions, the Monash simulation shows a short-run employment loss of 100,000 jobs. That was not challenged by Murphy's modelling. Murphy gave an opinion that that was totally unrealistic. It is not unrealistic if you make the assumptions that we made, that wages jump with the CPI. If he had done that then I am sure he would agree that that was a reasonable estimate of what would happen. What he said was unreasonable was the idea that wages would jump with the CPI.

I must say I think he is very optimistic on this point. I looked at that ACTU submission to your committee. They argued quite forcefully there that they do not see the cut in income tax as being compensation for the jump in the CPI. They are arguing that the cut in income tax is a long overdue correction for bracket creep. In other words, they look at the tax scales and they see they have not been changed since 1993. Although inflation is slow, there has been a considerable increase in the price level. People have been moved into higher tax brackets. They look at this cut in income taxes as being basically compensation for bracket creep.

Whether they are right or whether they are wrong is not critical to this point. The point is, as we said in our report, it was a considerable risk that wage earners would want their wages to move up with the CPI, especially wage earners on very moderate incomes where the ACTU figuring showed that the tax cuts offered are really very small and would not compensate them even for the bracket creep that has happened since the early 1990s. I do not think that this scenario in which wages move with the CPI should be dismissed out of hand.

Turning to slide 3, Murphy gave us quite a long list on economic modelling. He put forward several criteria for how to model ANTS. He identified numbers one through four as being critical, that is, that we must have an accurate representation of the indirect taxes both before the change and after the change; we need detail on substitution effects, how people respond, and how they change their economic choices in response to change in relative prices; we need to get the terms of trade right, which is mainly to do with what we think happens to export prices when we expand export volumes; and we need to calculate economic welfare accurately.

Let me add two more criteria. If we are contemplating a major change in economic policy we need to think about transition paths, how we get from where we are to where we would eventually go. Murphy was silent on that issue. Of course, all that material that was presented earlier was to do with the labour market. That is a transition problem, a transition problem that certainly should not be ignored. The behaviour of wages and employment in the short run is absolutely critical to deciding whether you would really make this change in the tax mix.

Another issue is forecasts. The methodology that Murphy uses is comparative statics. Literally, what he is asking us to believe is this. Let us make a picture of the 1997 that we just had. Let us make another picture of 1997 in which there is a brand new tax system in place and it has been bedded down entirely. Let us look at the difference between those two and let us decide whether we want to go on with this tax reform by looking at that difference. It is really quite a hard mental exercise. You have got to say to yourself, 'Perhaps we had this tax reform back in 1980. Then we got to 1997 with this tax reform in place. That would be one picture of 1997. Here is another picture of 1997 which is the one we had without the tax reform.' Compare those two things and decide that that is the basis on which you are going to make your decision as to whether to embark on this tax reform or not.

However, even if you are only interested in the long run, and I do not see why you should be only interested in the long run, but even if you were only interested in the long run, you do not want to compare two pictures of 1997, you want to compare two pictures of the year 2010 or 2015. The structure of the economy in 2010 is not something that we can know with any certainty, of course, but we know quite a lot about it. It is going to be quite different from the structure of the economy in 1997. We know, for instance, that tourism will be a much bigger share of our export bundle in 2010 than it was in 1997. In other words, we know that if we damage the tourism industry we will be doing more damage to the 2010 economy than we would be doing to the 1997 economy.

Although forecasting is a tricky business and cannot be done with any precision, the forecast that the year 2010 or the year 2015 will have exactly the same structure as the year 1997 is not a credible forecast. When we are looking at economic policy issues, even if we are only interested in the long run, even if we just want to do comparative statics, we should at least try to do it around the right year. That makes a considerable difference to what you think about the effects. With practically all the things we do, it makes a considerable difference in some way. But in this case it makes a considerable difference to do with tourism, because tourism is a fast growing part of the economy. It will be more important to us out there in the year 2010 than it is now. International trade in general is a fast growing part of the economy. So damage to the terms of trade is more important to us out there than it is back here.

One forecast that the committee was interested in was the movement of indirect tax revenue relative to GDP. The slide shows our forecast with no change in the indirect tax rates. That is the sort of material that Treasury should be producing for you; it is not the sort of material that university professors have got any particular comparative advantage in. You will remember that last time I explained why the growth rates in indirect taxes and GDP would be roughly the same, because indirect taxes fall on some fast growing items and on some slow growing items: fast growing items being such things as electronic equipment and computers; slow growing items being such things as cigarettes and alcohol. Those things tended to balance out and gave us growth rates in indirect tax revenue from the present system at roughly the rate of GDP. To do that work you need a forecast; you cannot get away from doing a forecast.

The next slide shows a forecast of how indirect tax revenues would change with the new package. You can see that there is an immediate blip in indirect tax collections, with the introduction of the GST, and so you get very strong growth for a little while in indirect tax revenues. That is of course more than offset by the reduction in income tax revenues. But, after the system has bedded down, indirect tax revenues will rise at roughly the same rate as GDP again. After the initial introduction of the new tax, there is nothing to suggest that the tax revenue from the new system will grow at any significantly different rate from GDP—as is the case with the old system.

Let us take some of Mr Murphy's criteria. The slide shows a representation of the indirect tax system. The work is impressive that Econtech has done with the disaggregation of the 305 commodities. There is clearly an advantage in trying to model indirect taxes and substitution effects, so I think that is impressive. But I do not think that Monash got anything particularly wrong in this area, all the same. Monash got right what Treasury got right. To the extent that Mr Murphy has found mistakes with the Treasury work, we have to plead guilty; but my overall impression was that he did not find any really important mistakes.

The next slide shows substitution effects. I was trained by Leontiev, and a basic assumption of input-output analysis is that the elasticity of substitution between steel and chemicals is zero, and so an increase in the price of steel does not lead you to use more chemicals and less steel. In Monash we have assumed for years that the change in the mix of intermediate inputs is dominated by technological change. We make forecasts of technological change, and that is how we change the mixture of intermediate inputs. We do not allow them to be price responsive. Clearly, that is not right in some areas.

We think we see some price responsive substitution between energy products and, on occasions, we have made the assumption that there is a price responsive substitution between energy products. There was not time to do that here. On the whole, replacing our assumption of zero as being the substitution elasticity between different intermediate inputs with Murphy's assumption of 0.5, I do not think there is anything to suggest that 0.5 is a better number than zero.

Mr Murphy—I do not have substitution between recurrent, if it is just capital—

Prof. Dixon—In that case, we agree.

Mr Murphy—That was a heavy interjection, sorry.

Senator FERGUSON—Perhaps we should have the interjection on the record.

Prof. Dixon—I withdraw my comment. My overall impression from reading Chris's report was that there was substitution between recurrent inputs.

Mr Murphy—No. I suggest that there is limitation of the MM303 estimate that does not allow for any substitution between recurrent inputs, but I would agree with Peter that there would be some, which would be a reason why the welfare gains are understated. But there would not be a lot, and I would agree with that as well. That is the reason I have understated it.

Prof. Dixon—Right. So on that point we are on all fours, okay. Between capital and labour, in Monash we have assumed 0.5 is the substitution elasticity; in MM303 the number apparently is 0.75. I do not think there is much to choose between those two numbers; I do not think that is an important issue.

The econometric evidence, such as it is, is mixed. Certainly I do not take any notice of the macro estimates. If you go to the macro level and estimate substitution elasticities—so you increase wages relative to the costs of capital—every industry then substitutes towards capital. But at the macro level the substitution looks bigger than at the micro level, because you also get the effect that the cheapening of capital favours capital intensive industry, and so the whole economy moves towards capital intensive industries. So quoting numbers, such as one, that have been found at the macro level has very little relevance at the micro level. It turns out not to be a very important issue, but I think 0.5 was as good as 0.75—although I would not mind rerunning our stuff with 0.75; that would not be a problem.

Turning to inputs to capital creation, this issue is about how you make a unit of capital for an industry: you use so much building, so much motor vehicle, so much computer. Again, the tradition has been that the elasticity of substitution between inputs to capital creation is zero, but that is not supported by any particular empirical evidence. Murphy wants 0.5 there: is that right? I will just make sure I have got that right.

He points out that there was a considerable decrease in the use of cars as part of the capital stock with the introduction of the fringe benefits tax. It seems to me that that has got very little to do with substitution in capital creation. That was all to do with changing the way that people were actually paid, so my feeling is that a lot of the cars that were in capital stocks were not really part of the capital stock at all; they were merely employee remuneration. So I do not think there is any particular evidence in favour of a number like 0.5 for an elasticity of substitution between different inputs to capital creation and the number zero.

On consumer goods, again the Murphy analysis is facilitated by the very high level of commodity disaggregation, which is indeed impressive. Much was made of the terms of trade. This issue revolves around export demand elasticities—around how much the price on world markets is affected by volumes of our sales. It is a really difficult issue in that, if you go around telling people in the business community that you have assumed 20—in other words, you can increase your volume of sales by 20 per cent and only reduce the world price by one per cent—they do tend to laugh at you. Nobody believes that. Yet that is the sort of thing that we used to assume.

In recent times, I switched to four. It is true that we did not announce that in the paper; that was an oversight, sorry. I certainly did not make a secret of it. There are many things that we did not announce in the paper. A model evolves: we have changed many parameters and updated databases, and many things have happened. I did reveal in the paper everything that I thought was necessary to understand the results. When Chris rang me, I was only too happy to supply anything else that he wanted. The Monash model is completely open. We have training courses on it. All aspects of the database are open to scrutiny. That is why the Monash model and the ORANI model before it have been subject to such extraordinarily intense criticism over the years. You can criticise it. You can know precisely what it is in it.

We switched to four. Why? This was done well before this GST work. It has nothing to do with the GST work, and that can be easily proved. I have written a paper about the subject, which predates any work we did on this topic. I came to the conclusion that four was a better idea than that very high elasticity. That is still a very high elasticity. That is still higher than econometricians ever find. But I came to the conclusion that that was a better guess about this topic than were the previously very high numbers that we used, the 20s, for a couple of reasons.

One reason is that I eventually gave up on trying to estimate this thing directly just by looking at what happened to the prices of exports and the quantities of exports. That seems to be a hopeless methodology. It just does not work. You are not sure whether you are estimating a demand curve or a supply curve—the thing is a mess. What do you do? The obvious thing to do is to start looking at import demand elasticities. I looked at some import demand elasticities, and they suggest much lower numbers for our exports. You look at the foreigners' import demand elasticity, and then you can get an idea of our export elasticity.

Another elasticity lowering idea is the difference between FOB prices and landed duty paid prices. The FOB price is the price of our export in Sydney. We can increase the price of our export in Sydney by 10 per cent, but the user in Tokyo sees only five per cent. Why? Because there are all those margins to get the thing to Tokyo, and then there are their tariffs and distribution margins and so on. So movements in our export prices are really quite muted by the time they arrive in those foreign markets. These export demand elasticities are about the effects of movements in FOB prices on demands in the foreign country. You can move your price here, and the effect over there will be muted.

Finally, in recent years we have used our model Monash—this is not usual in CGE modelling—but we used our model Monash to try to reproduce bits of history. It has got to the stage now where we try to track pieces of history. The model is dynamic; it goes from year to year to year to year, and so we try to reproduce bits of history. We are finding it one hell of a lot of easier to reproduce bits of history with these lower elasticities, although they are still high: four is a big number. We are finding it much easier to reproduce bits of history successfully with these lower elasticities than we ever found with the high elasticities. For all those reasons, I now think that four is a better number than 20.

On the topic of welfare effects, I learnt a considerable amount from the conversation I had with Chris on Saturday, and my own writing on this topic will be considerably sharper and improved. So I thank you, Chris, for that. What we reported in our paper was the blue line on the graph. Chris's analysis on this is right—as it is on most issues. The blue line is the welfare effect expressed as a percentage. On the favourable cases where employment increases in the short run, there is a welfare win in the short run. It fades away as employment comes down and as the terms of trade deteriorate as exports expand. That is the lower bound.

The upper bound is the pink line. Although I think I stand corrected on this issue, I do not stand corrected by very much. I stand corrected by about half the difference between the blue line and the pink line—which, as Chris pointed out, is $200 million. But I prefer to look at it as percentages.

Responsiveness of capital was a tricky issue, because there was a big difference in the results. We said that, in the long run, investment would be 2.8 per cent higher. Chris said seven per cent. For us the capital stock, in the long run, is only about one per cent higher than it otherwise would have been. For Chris it was considerably more. Chris gave several of the reasons, which were correct, and one was the lower substitution between capital and labour.

On thinking about this, it seemed to me that the most important reason was what I am going to try to explain from the final slide, which is to do with differences in the composition of capital across industries. Some industries, such as road transport, have a lot of motor vehicles in their capital. Some industries do not have a lot of vehicles in their capital—for example, mining. Let us take an economy with two industries: beer and transport. We will make the capital stock of beer worth three and the capital stock of transport worth one. I am making this up as I go along, so it is helpful to call them beer and transport.

A feature of the beer industry is that it is quite slow growing, so it invests 0.4 per cent a year. It has a low amount of investment relative to its capital. A feature of transport is that it is quite fast growing and it also has very high depreciation rates. It has investment of 0.4 per cent relative to a capital of one.

A feature of MM303 is that the capital stock of every industry consists of exactly the same bunch of goods, and so there is no distinction. There is no industry that has a lot more motor vehicles and a lot less buildings, or a lot more buildings and a lot less motor vehicles and so on. Let us assume for a moment that the cost of a typical unit of capital in each industry on average is going to fall by six per cent and let us assume that the models agree on that point.

MM303 would show a six per cent reduction in the costs of capital in each industry—that is the minus six and minus six—but Monash does not. Monash recognises that, in fact, the major reduction on the cost of capital is in vehicles, cars, so Monash says there is no reduction in the cost of capital to beer but there is a 12 per cent reduction in the cost of capital to transport, adding up correctly in both cases to six per cent; so we agree at the macro level.

So Monash says that there is a stimulation in the capital stock of transport, six, and no stimulation in the capital stock of beer—you can see the zero and the six—whereas MM303 smooths that out, as three and three. Now add up the nought and six from Monash, with capital weights—going right back to the beginning of the first line—that is, the three and the one, and you come to the conclusion that the economy’s capital stock increases by 1.5.

Failing to recognise the difference in the composition of the industry capital stocks leads you, in MM303, to conclude that the stimulation of capital is three per cent—twice the result from Monash. For that reason that leads to an overestimation, in the 303 case, of the stimulation to capital from the package.

I will just summarise all of that. I think the most important thing is not the battle between Chris Murphy and Peter Dixon as to who has got the better model. That is quite interesting and I enjoy that—Murphy's report is more like a referee's report that you get when you submit something to an academic journal, when you get this huge list of miserable criticisms, and so on and so forth, and you learn. Although that is very interesting, and I accept quite a lot of the criticisms and I reject some others, the really important point is what I said at the beginning: the results are the same.

I hope the newspapers can get that point. I was a bit surprised at the way they reported our earlier conclusions: 'economists disagree', 'violent disagreement' and so on. That is not true in this case. Properly interpreted, the results are the same in all important respects. That overhead I showed of the long-run results—they are remarkably similar. Short-run results—Murphy is silent on that; however, he does not find what I say implausible. So I think that there is actually a very high level agreement here, not disagreement. Thank you.

CHAIR—That concludes your remarks, Professor Dixon. It has been suggested to me that I should invite Mr Murphy to comment further. But, in view of the time, if anyone wants that to occur they can ask a direct question to Mr Murphy, otherwise we will be in an interchange all day. I think it is appropriate that we now turn to the committee for questions. I have asked the secretary to calculate the available time and divide it fairly between the parties for questions. I will observe time limits on the parties, and it is for the parties to determine how they use that and which of their members ask questions. I recognise immediately this is entirely inappropriate because we are all elected individually and should have free rein irrespective of our party allegiances, but I will do that for the practical purposes of the inquiry. I, of course, will take the time of the Labor Party.

We have to make some sense of all this, and we have to do it pronto. We have got a report to come down at the end of this week and here we are, at the business end of framing our report, with a lot more information swimming around. I essentially make these tentative conclusions from what has been put to me thus far. First of all, Mr Murphy has quite considerably amended his position as put to us last week. I see the nod of the head. Let me explain. Last week, the positive benefit of the package was addressed to us as $850 million; today, the positive benefit of the package is addressed to us as $607 million. The positive benefit before was rounded, helpfully, to $1 billion, but what you are putting to us now is that it is really $607 million. I regard that as a substantial amendment, in effect.

But I am mindful of the fact that what both of you seem to agree on is that we should not have slavish attention to the numbers, we should try and understand the arguments. On the arguments, the conclusion just explained to us by Professor Dixon seems to be true: there is a substantial degree of congruence between your conclusions—there is a differentiation between above the line and below the line in terms of effect, but the outcomes are substantially the same. One of the questions, therefore, for judgment for this committee is: why do we make all of these changes when there is largely, at the end of it, after around 10 years, a neutral effect? Is it worth the candle? That is one of the first comments.

The other problem I have is that mostly what we seem to be modelling is efficiency, when what has been put to us constantly is the three other principles. A table with one leg cannot stand. A tax system in which we have before us one set of modelling without regard to the other two that support the system equally seems to me to be at risk if we have to make a judgment about it. I cannot for the life of me separate the equity considerations from the efficiency ones or from the simplicity ones. I think it is a shonky conclusion, with respect, Mr Murphy. I use the word ‘shonky’ because you have coined it as a description for economic modelling.

Senator FERGUSON—I am not sure he coined it. I think I have heard the term before.

CHAIR—He used it last week with respect to the work of another distinguished modeller. The conclusions in your paper on simplicity and what that brings I do not think are sound at all. I do not have time to go through why, other than to say they are based on the assumption that the existing system is equitable, and that the only question for us is that the changes continue that equity.

I think that is a big assumption, and I do not make it. Evidence why I do not is that the ACTU tell us in their submission about bracket creep, and what they will do to protect low income earners. If they tell us that—and so does the shop assistants’ union who cover low income earners—we are entitled to believe them, if not in whole, then in part. That does go to equity, which is, of course, in the eye of the beholder. But it is what happens because of the perceptions of equity at various levels that changes the outcome.

I do not know that modelling efficiency can tell us anything about jobs and job creation. I must say, the argument of eliminating poverty traps—although they are not being eliminated; they are being smoothed a little—does raise the question of what is the best way of doing that. A tax credit system would be a better way of doing it than the government’s way of doing it. Whether the smoothing of some poverty traps will be sufficient to create the incentive for work to the level that has been projected is an arguable assumption. I do not know that it can tell us much about jobs. As for not modelling the transitional costs, if you drop a stone into a pool it creates ripples, it scares the bird life at the edge of the pool, it frightens the fish who dive deeper, it rocks the boats on the pool and it might even tip a few people out. But, if you wait long enough, the impact goes away. However, you start at an entirely different level because of the changes the transition has created. That maybe a poor analogy, but it is the best one I can come up with at this hour of the day. I just do not think you can put aside the transitional effects, assume that they wash out and you return to the same base later.

Senator FERGUSON—Are we going to debate the issue with the two modellers before us, or are we going to have questions? It is the longest question I have ever heard.

CHAIR—We are going to have questions. I am being somewhat bold here in giving my tentative conclusions to the expert commentators. I would not mind hearing them demolish them, if they could.

Senator FERGUSON—I did not think it would be a debate between us and them. I thought we were here to ask them questions about their modelling.

CHAIR—As far as I am concerned, I have to draw conclusions very quickly. These are my tentative ones and, if I am wrong, I would like to hear the experts say that I am wrong. My final issue is the economic growth impacts in what Mr Murphy has done. I see the figures, but I do not see the calculations as to how you arrive at the figures. I do not see the linkage at all in your paper.

Maybe it is in the second part of the paper, but I see it as a set of assertions, rather than as anything that has numbers by it, and that flows from any sort of econometric or modelling calculation. I see the surprise you have evinced, Mr Murphy. You are going to have to convince me that I am wrong about that. To do so you are going to have to show me how you worked out those economic growth impacts, rather than simply assert them, because I cannot find it in your paper. They are some of the views. I am conscious of the time so I will stop here. Do either of the two experts have any comments on those things?

Mr Murphy—I would like to make two comments. The welfare gain figure in the hard copy of the presentation I gave on Friday, the week before last, will show that the welfare gain figure was stated there at $600 million. The presentation I have given today says $607 million. The $600 million was obviously just rounding. It has actually gone up and not down. The reason for giving the $607 million today, you may recall I went through a series of comparisons of varying assumptions. You need to go to that extra level of precision to see the difference it makes in making one assumption.

CHAIR—What does 850 relate to?

Mr Murphy—Where is the 850 from?

CHAIR—You rounded that to $1 billion as being a positive advantage package.

Mr Murphy—Where was that?

CHAIR—In your evidence.

Senator CONROY—In your press release that you bailed the Prime Minister out with during the election. You have a figure of $1 billion.

Mr Murphy—That is back in September or October.

Senator CONROY—Yes, during the election campaign. It was unimportant at the time.

Mr Murphy—A series of issues have been raised. The suggestion was made that the story last week was different from the story this week. That is not correct.

Senator CONROY—It is different from the story during the election, which is actually a more accurate representation.

Mr Murphy—There are five points I need to address and I will address them each. If there is another question, I will take the other question. Is that a reasonable way to proceed?

CHAIR—I have not raised them specifically with you. I have given the meeting some tentative conclusions of mine and invited comment.

Mr Murphy—Yes. What was put to me was that the estimate of the welfare gain has changed from the last presentation to this presentation. That is not true. It was $600 million in the last presentation, which is just a rounded version of $607 million.

CHAIR—But it seems to have changed.

Mr Murphy—Over a long period of time it has changed, that is correct.

CHAIR—Between the election time and now. Submission No. 57 on page 7 says:

Table 3 shows a gain in annual national economic welfare from the tax plan of $1 billion. This estimate is conservative and arises largely from—

and on it goes.

Mr Murphy—That $1 billion figure is out of date and I would not suggest that you use the $1 billion figure. The $1 billion figure was before my—

Senator CONROY—Yes, before the election.

Mr Murphy—It is absurd to suggest the election had anything to do with it. I find it a highly offensive suggestion. It is idiotic and I do not know why you bothered to invite me here if people are going to make absolutely stupid suggestions like that. I have to be perfectly blunt about it.

The reason the figure changed from the original estimate of around $1 billion was that I did an assignment for the Minerals Council. They queried some of the export demand elasticities I was using and, as a result of that, we agreed on what was a better set of export demand elasticities that reduced the estimate of the gain from $1 billion to $600 million. I will always give you whatever my best estimate of the gain is at the time. That is the reason for the change. Any suggestion that it is anything to do with an election is offensive and stupid.

Senator CONROY—Could we clarify that it is down by 40 per cent from the one you gave during the election campaign.

Senator FERGUSON—So, what is the point?

Senator CONROY—It is the 40 per cent reduction in the welfare gain that is the point. The timing, people can draw their own conclusions from, but are we agreed that you have reduced your gain by 40 per cent since you have done further refining of your model?

Mr Murphy—That is correct.

Senator CONROY—Thank you.

Mr Murphy—That is right, $600 million is the figure I am putting to you, that is my current best estimate, no question.

Senator CONROY—A 40 per cent drop.

Mr Murphy—Going through the various points that were raised, the critical point to understand about the $600 million is that that is a lasting benefit. That is the estimate of what the gain in consumer welfare is on an annual basis from one year to the next. It lasts forever.

The issue that was raised was: what about the transition effects? On the transition effects, the assumption used in five out of seven of Peter Dixon's simulations and also in his central simulation about labour market adjustment I think is the most plausible one. That shows the 30,000 jobs gain. However, it is important to understand that all his simulations show the neutral effect on jobs in the long term, as do mine. When economists look at these things, they look at the lasting effects. There is no point having an economic change which may be good or bad for the first few years if in the longer term it is bad.

So the critical issue is: what are the lasting effects? You base the structure of the tax system on the lasting effects of changing it. What we know about that is that the best estimate of the gain is $607 million and, without taking account of the fact that it reduces poverty traps, the long-term estimate of the effect on employment is neutral. Both Monash and Murphy agree on that.

The next issue that was raised was the issue of equity. I made it as clear as I could that I consider equity is an important issue, and equally I consider efficiency is an important issue. Efficiencies are to do with the size of the economic cake; equities are to do with its carve-up. Both are obviously very important, so it is important to have estimates of the effects of both. My modelling does look at the efficiency issue. Of course, you are correct, you also need to look at the equity issue, but you need to look at the efficiency issue as well. There is no point having an equitable carve-up of a cake that is very small. Equally, there is no point having a cake that is very big, if the carve-up is inequitable. So you need to look at both equity and efficiency.

Senator MURRAY—I point to my earlier remark on that that I think should come in here. My own judgment was that efficiency and equity together rank ahead of simplicity, and that is really what I was looking for as a judgment. Perhaps you could comment on that as you are answering this question?

CHAIR—That is fair comment. Please consider that, too, Mr Murphy. One of the problems about being a parliamentarian is that you have to actually make decisions between competing principles, and sometimes principles clash. You have to then assign a value of how you reconcile that clash and which one do you favour. Do you favour greater equity over greater simplicity or efficiency? They are some of the considerations that we on this side of the table will make.

Mr Murphy—Sure. On the issue of simplicity, I am not an expert in the area of compliance and administration costs of different tax regimes. My suggestion would be to take expert evidence in that area.

CHAIR—While you have got the floor, what about the primary proposition that there is not a lot of difference between you and Professor Dixon?

Mr Murphy—I think that is true on most issues. I did make some notes as Peter was going through his presentation. My best estimate of the welfare gain is $600 million. As I interpreted Peter’s presentation, he was agreeing with me on some of the differences between him and MM303 and Monash, but he did not give a bottom line assessment of what he thought the welfare gain was. I think we would need to have a long technical discussion between the two of us to get to the bottom of that.

My position, notwithstanding what he said, is that the best estimate is $600 million. That is also similar to an estimate produced by Chisholm some years ago. So it is certainly in the ballpark in terms of general opinions of economists. Chisholm had about a billion dollars, but he did not allow for these terms of trade effects that Peter has introduced into the debate.

But as I say, the important point is it is a lasting effect; it goes forever. The transitional issues are just that—transitional issues. So it is $600 million year after year, year after year, versus not having it. The bottom line, in my opinion, is that ANTS is a worthwhile change, but, of course, every member of the committee has to draw their own conclusions on that subject.

I do not agree with Professor Dixon that wage blow-out is a high risk. I think it is a very low risk. This is a favourable labour market shock because there is an improvement in after tax real wages.

CHAIR—But you have heard what the ACTU has said about that. You discount that. The other point about this, too, is the inflation effect in the first year is higher than we have been led to believe. On top of that, you have to add other costs that were not included in the estimate, both by Treasury and by yourself.

Back there on the factory floor, the office, the service desk or wherever it happens to be, people will be seeing that they are not going to get compensation for what they thought they were going to get that will actually cost more. It may well be moved to maximise their bargaining power, if they can, and to overcompensate themselves. Can’t they do that? It might not be rational, in terms of the package, but whoever said that the world behaves rationally all the time?

Mr Murphy—I think, though, the international experience suggests this is a low risk, but the thing which is particularly different about Australia compared with the other countries introducing this type of package is that we are starting from a position with a large budget surplus. So we have about one per cent of GDP in physical stimulus in this. So that is some insurance on the labour market, but it also means that there is the money there to overcompensate people. If you are actually overcompensating people, it seems to me that you take that into account, and the international experience is that the risk objectively is very low, but people make their own judgments about that. I am not trying to insist to anybody that that is the case. That is just my view.

CHAIR—It is my view that where we have bargaining strength, they will maximise it, but low income earners basically do not have it by definition, and they will not be able to. But that is another matter.

Senator CONROY—Your model incorporates rational expectations which allow people to predict where interest and exchange rates will be 10 years from now. That is one of the assumptions that is based into your model, and one of your former partners, David Chessell, suggests that this is asking quite a lot of people.

Mr Murphy—That is the MM2 model. It is a completely different model. The issue of expectations is a transitional issue, and Peter was commissioned to look at the transitional issues. That was a question that was raised with us as to whether they thought they were important. I think they are of some significance.

Senator CONROY—Your model can change so that people can see through all the different movements around—people can see right through them.

Mr Murphy—That has got nothing to do with the modelling presented here. The model that you are referring to has not been used here.

Senator CONROY—No. What is your argument for why you describe it as implausible? I am trying to get some understanding of it. I understand you are saying that your previous model had that rational expectations position. This is a new model. What I am saying is, on what are you basing your assertion that Professor Dixon's position is implausible?

Mr Murphy—The rational expectations in my MM2 model are in the financial markets, not in the labour market. In the labour market, I assume a mix of backward looking and forward looking behaviour. I do not think the labour market operates entirely on a forward looking basis. It is not that sophisticated.

The only other comment I would like to make, which has not been covered so far, is putting these employment shifts into perspective and they certainly are occurring. But what do they actually amount to in terms of historical experience? I have included in my paper on pages 29 through to 31 a series of charts. What those charts do is say, 'Well, suppose this tax reform had been introduced much earlier, how different would employment in each industry be now, compared with what it would have been without the tax reform?'

What that shows is that, while the end point of employment in each industry would be slightly different, up or down, in the case of every one of the 17 industries that change is small in relation to normal historical movements in employment. So there are shifts, but there are much more important forces at work in the labour market causing movements in employment across time in each industry.

Senator CONROY—So there are job losses in some sectors?

Mr Murphy—Job shifts, which I define as a job loss balanced by a job gain in another sector, that is right.

Senator CONROY—So there are some sectors where there are job losses in the short-term?

Senator FERGUSON—There are some that will gain.

Senator CONROY—I am not contesting that there is a net position.

Mr Murphy—That is right. These are long-term results and my chart shows—

Senator CONROY—It is just that the Prime Minister dismissed your position that there are some short-term job losses. The Prime Minister has stated publicly there are no short-term job losses.

Mr Murphy—My long-term results, as shown on page 27, show job losses in some industries are exactly offset by job gains in others. So there is job shifting. The assumption is that there is no effect on national employment, but that is a conservative modelling assumption.

Senator SHERRY—If you came from Tasmania, for example, as I do, I do not think you would be particularly happy that the price of the 65c a week in welfare to Tasmanians is achieved by a loss of 1,000 jobs.

Senator FERGUSON—You would have a lot of trouble getting a headline out of that.

Senator SHERRY—And the same would be true across other areas of regional Australia.

Mr Murphy—Chart 5, page 32 is what we are talking about and it shows job shifts between states. I think there is a broader principle to understand here. This model assumes that national employment is unchanged. That means whatever economic change you simulate with it there will be job shifting between industries and between states. If the proposition is that a job loss in some industry or some state is a reason for vetoing economic change, you would have to be against every economic change in the future and, for that matter, every economic change that has occurred in the past. We would still literally be living in caves. It is not a sustainable proposition.

Senator CONROY—But if I stand up and say there will be no short-term job losses, I am not accurately portraying the impact, am I?

Mr Murphy—These are long-term results.

Senator CONROY—Answer the question. You have already agreed there are some short-term job losses—

Mr Murphy—You are talking about the short-term, and my results are for the long-term. I am agreeing with Professor Dixon's estimate that national employment is up by 30,000 in the short-term.

Senator CONROY—With the most favourable short-term assumptions.

Mr Murphy—I do not have estimates—

Senator CONROY—A 100 per cent flowthrough—

Mr Murphy—I do not have estimates of how that is distributed across industries, so I cannot give you short-run estimates of the effects on the industry pattern of employment. If I had been commissioned to do so in the main review, I would be presenting with such estimates. I offered to do that.

Senator CONROY—If I stood up and said that there will be no short-term job losses anywhere in any state in any industry you would laugh at me.

Senator FERGUSON—It is not what the Prime Minister said.

Senator CONROY—It is. You go and get the quotes.

Senator FERGUSON—He did not say, 'any industry, any state.'

Senator CONROY—If you want to answer the questions, Senator Ferguson, there is a chair over there.

Senator FERGUSON—Stop the sledging, Senator Conroy.

CHAIR—Order! Let's settle down. Where were you, Mr Murphy?

Mr Murphy—Where was I? I guess I was just making the observation that these models assume unchanged national employment. That means anything you simulate with them will show job shifting, which means job losses in some industries exactly offset by job gains in others and job losses in some states will be exactly offset by job gains in others. So a simple observation that there are job losses in some industries or some states could be made about any economic policy whatsoever no matter how worthwhile you simulate with these models. So it does not really get to the point. You have to balance the job shifting against the welfare gain.

Senator CONROY—You are being honest enough to make that point.

Senator FERGUSON—Chairman, how long are you going to let Senator Conroy sledge the witness?

CHAIR—Let us settle down. I think you are both wrong in terms of the mining industry. Any greater income to the mining industry will result in more jobs being lost, as it heads towards replacing labour with technology. I think that is the record of the mining industry, particularly in my state. Professor Dixon, do you have any comments on the proposition that I am putting?

Prof. Dixon—Yes. I will make three comments. One relates to what Mr Murphy said about transition costs. Of course they are important. It is not just the long-run thing that matters. Even if you did have a gain that went on and on forever after 20 years, you have got to do discounting and say that the future is less valuable than the present and all that. Transition costs are clearly quite critical in this issue.

On equity issues, don't believe you should go to PRISMOD for equity issues. You can attach outcomes for households to the sorts of models that both of us have presented, and that is a better job than a model which is giving you no economic responses. One of the things you have to think about in equity is what happens to employment by occupation, what happens to employment by region, what happens to employment in different industries and so on. Those should be translated into equity issues. You did not commission that work. I strongly disagree with Chris's categorisation that our sorts of models are not about equity issues, of course they are about equity issues. I think they can provide very interesting results on equity.

Terms of trade has been mentioned over and over again and the $600 million. With that $600 million, let us keep calling it 0.2 per cent of something. That is the number to keep in mind and not the $600 million, because it is very hard to think what $600 million means. Even the $600 million disappears if you assume slightly stronger terms of trade effects.

Chris talked about the chat that he had with the Mining Council, and how he brought his export demand elasticity down, which moved him from a thousand to 600. I suggest that he should go and have a chat with a few other industries because he may well find a move down from that 600 to a negative 300. That is a number that was produced with the export demand elasticities that we are currently believing. The real point is that the long-run economic welfare effects, as well as we can measure them, are zero, plus 600, minus 600. For a huge change like that the right answer is zero and, as economists, we do not know any better than that.

Senator FERGUSON—I promise my question will not take five minutes to ask but there is a short preamble that I want to put into it. The chairman has said that, in taking into account the views of your modelling, we have to be in a position where we are going to determine our position before coming to a decision. That is a very strange comment that comes from a Labor Party senator who has come to this inquiry with a predetermined position, and that is one of opposition to the package regardless of what the evidence is. That has been stated publicly by the Labor Party on numerous occasions.

CHAIR—Your position could be to reject the findings of the committee.

Senator FERGUSON—I will move on to the issue of trade elasticities. Prior to us taking public evidence, we had a briefing from Professor Ken Wallis who, as I understand it, is well regarded by the gentlemen in this room. Professor Wallis said there should be an emphasis placed on transparency when modelling was being done. I am concerned, Professor Dixon, that you have said to us that you have changed your elasticities in the figures that you use, without any publicity. You say to this committee that that was an oversight. It would appear that either Monash's model has been wrong for 15 years or it is wrong now. I think it is disturbing when we are talking about transparency. Although you say it is an oversight, you also said you have been using the figure for some time, but it has not been made public. I think that is disturbing to the inquiry. Could you comment, Professor Dixon, and then I would ask Mr Murphy to comment.

Prof. Dixon—On that transparency issue, I think our record at the centre is absolutely impeccable. Everything we have ever done we have made public and that is very unusual in the model-building business. So all of the parameter values are available to the public.

Senator FERGUSON—So why didn't you let us know about the elasticity changes?

Prof. Dixon—Do you think I should have—

Senator SHERRY—Pity we didn't get told about the mining industry changes.

Senator FERGUSON—Who has got the call?

CHAIR—Order!

Prof. Dixon—I will just try to answer this thing. In some sense I did let you know; I wrote a paper about it. I presented the estimates in a public way to a group of my peers, so I did let you know about it. Obviously, I could not call a press conference and say, 'I am an important fellow. A new revelation has struck me today, so write that up.' That is ridiculous.

There is no secret about those elasticities. There are probably a lot of other things that I have changed in the past two or three years as well. It is not a secret, it is just that I have not made a public announcement about it. Chris, a very talented fellow, worked it out. I did not recognise that that was critical to getting from 0.02 to minus 0.01, or whatever the hell these tiny numbers are. I did not actually know that that was critical. He did. So that is one up to him. I did not make any secret of the fact that we changed the elasticities. I told him the complete history of it and I sent him the little paper in which I justified the change in the elasticities. What more can I do?

Mr Murphy—There are a few comments I would make. Peter Dixon is correct when he said that he fully cooperated. Whenever I asked him for additional information, he provided it promptly. The substantive issue really is what these elasticities should be. The compelling point here is that, if you did actually believe the new elasticities, the implication is that the welfare maximising thing for Australia to do is to have uniform import tariffs of 33⅓ per cent. As I say, pretty much every economist in Australia would reject that sort of suggestion out of hand. It has been driven by these export demand elasticities being much lower than they were before. So my position is simple: the new elasticities are wrong and are leading to an understatement of the welfare gain.

A very admirable feature of Peter's career has been working for tariff reduction. If the new elasticities were to be right, he should have stopped about 12 years ago when the tariffs got down to about 33⅓ per cent, but he has pressed on and has, in the more recent inquiries, argued that car tariffs at 15 are not low enough and that they should go to five. If he believes in his new elasticities, as I say, he should have stopped 12 years ago. The answer to all of that riddle is that the new elasticities are not plausible when you use them in a policy context.

Senator FERGUSON—You have made Senator Murray's day, anyway!

CHAIR—For a horrible minute, I thought we were going to debate car tariffs. Please do not!

Senator FERGUSON—When you were talking about the effect of wage demands—and Mr Murphy and Professor Dixon have different views, particularly in relation to the ACTU's submission—I must say that the ACTU's submission was not surprising to us. But their figuring in that submission was based on a Tim Colebatch analysis of bracket creep and the effects of bracket creep. Colebatch, in that article, used wage indexation rather than the CPI to calculate bracket creep. His results, using that formula, are totally wrong. The only reason the ACTU complain is on the basis of their policy of indexation. Nobody else has a policy of indexation, and no party is offering indexation to tax rates. So to suggest that workers will compare tax cuts—

CHAIR—This is a political statement.

Senator FERGUSON—It is not as long as yours was, Senator Cook, I can tell you. To suggest that workers will compare tax cuts against some mythical measure of what they would get under indexed scales rather than what they may currently get—given the assumptions that they use in that—is totally wrong. So you are using the ACTU's submission to actually support your argument that, in fact, there will be pressure on wages. Is that a fact?

Prof. Dixon—No, Senator. I thought I was fairly careful about that. I outlined what the ACTU's submission was and then I said I did not necessarily accept that they had got it right. The important thing was that, if that was their perception and what they wanted to argue, there really was a risk that the scenario sensitivity one or two or whatever it was, with 100,000 jobs lost, would happen. It does not mean I have to agree with the figuring of the ACTU at all.

Senator FERGUSON—Mr Murphy?

Mr Murphy—I think that putting a lot of weight on what someone says in a particular submission about what they might do in particular economic circumstances does not make a lot of sense. As economic modellers, we try to predict people's behaviour on the basis of past experience. International experience of these sorts of tax reforms is that in relation to the wage blow-out that is being suggested might occur, the risk of that is low. The other point is that there is overcompensation being funded from the budget surplus, which is a luxury few countries have had. If you put those two points together—

Senator CONROY—Where is the overcompensation? I thought you were not a distribution person.

CHAIR—Order!

Mr Murphy—If you put those two points together then—

Senator FERGUSON—Is Senator Conroy going to continually sledge Mr Murphy when he is trying to give us an answer?

CHAIR—I am calling him to order.

Senator FERGUSON—He ought to show some common courtesy.

Mr Murphy—If you put those two points together, objectively the risk is very low.

Senator FERGUSON—The other reasoning behind that is the fact that even Jennie George, after she made her submission to us the other day, said that the union movement would not make wage claims costing jobs. Isn't that a further argument that it is unrealistic to assume that wage demands are going to have the effect that you said they would, in what Mr Murphy said are more unrealistic assumptions?

Prof. Dixon—No. I do not quite know how to answer that, in that I do not think Jennie George would accept our basic hypothesis that increases in wages in real terms reduce employment opportunities. The trade union movement has resisted that idea ever since I have been paying attention. Obviously she is not going to make wage claims that she thinks will cost jobs. But that is what she thinks. It does not mean that they will not make wage claims that will cost jobs.

CHAIR—In the absence of a compensatory tax trade-off, it was.

Senator FERGUSON—Can I move to another line of questioning. In your former appearance before us, Professor Dixon, you talked about elasticities for tourism. Tourism is one of the areas which has come under considerable public comment. In December your paper had an elasticity for tourism of minus four. In February, after advice, you revised it to minus three, or negative three, and then did sensitivities at a more generally accepted number of negative two. Now Mr Murphy, in his review of your work, has discovered different trade elasticities from those used in your work. With so much changing ground, do you think it is not unreasonable that we should be unconvinced by your results, especially on the basis that Monash would not appear to be best specified to analyse tax reform as such?

Prof. Dixon—Yes, you should be unconvinced by $30 million, $600 million—those numbers. What you should be convinced by is that, as we change these elasticities—and clearly we do not know what the answers are to these questions—we are moving these welfare gains from 600 0.2 per cent or 0.3 per cent, or whatever the number is, through zero and right down to minus 300. So what we have given you is a pretty consistent range. The two model builders that you have before you agree on this range. It is from minus almost nothing to plus almost nothing. That is the main point. What we aiming for in the long run is minus nothing to plus nothing. then it comes down to whether it is worth the candle or whether you really want to rip up the tax system for this. It is not that we are changing our results dramatically. The difference between 600 and zero is not very big.

Senator FERGUSON—Do you have a comment, Mr Murphy?

Mr Murphy—I have not seen a single argument yet which would lead me to want to change my assumptions and go below the $600 million figure. I think that is the best estimate that is in the domain. I think Peter conceded in his presentation that you would not do a number of the things you would have to do to get down from $600 million to a lower figure. The specific point there was that he agreed it was a good idea to have the second layer of substitution possibilities in consumption, for example, and he agreed that it was better to have a more detailed modelling of the tax system and so on.

I do not think there is any suggestion at all that the correct figure is lower than the $600 million, and in fact there are two specific reasons why you would expect it to be higher than the $600 million. One reason is that we are not allowing for substitution between recurrent inputs, which is a point that Peter made. The second reason is that we are not allowing for the work incentive effects of the reductions in poverty traps in the package. I did not say that it is eliminating poverty traps—of course it is not—but it is reducing poverty traps. So there are two positive benefits which are in the package which we would need to add onto the $600 million. I cannot tell you what figure that gets you to, but $600 million is not an upper bound, as Peter is trying to suggest; it is definitely a lower bound.

Senator O'CHEE—I believe in your presentation here this morning you said that you believed it was probably $200 million higher than originally estimated. Is that correct?

Prof. Dixon—Yes, I showed two lines and they were about $200 million apart. If you split the difference, it would be about $100 million. So instead of telling you whatever I told you last time, which was that the number was minus $30 million, perhaps it should be plus $70 million. But what I am really trying to tell you—

Mr Murphy—But that is why the point of saying that the lower bound is $300 million is misleading. There are quite a number of things you have to get to that which are implausible.

Prof. Dixon—Okay. The most important modelling issue that has come out of this is to do with the export demand elasticities. If Chris wants a way in which he can get his $600 million down to an even smaller number, well then he has found the way: lower the export demand elasticities within plausible ranges. Every time he talks to an industry expert, like the mining people or the tourism people, the export demand elasticities come down.

Mr Murphy—I would reject that line of argument. In my paper I have also reported on the supposition that as you expand export volumes export prices do not fall at all. I do not believe that, but that is the other extreme. If you do that, you get a welfare gain of $1,361 million. So a more accurate depiction of the situation is that my best estimate of $600 million—

Senator CONROY—What is your worst estimate?

Mr Murphy—My best estimate is $600 million and, sure, there would be some uncertainty around that. That $600 million does not allow for two other sources of gain that we know about, so it would be more accurate to say that it is my best estimate given that I have not allowed for those additional things. If you take those additional things into account, it is conservative. But to suggest that once you allow for uncertainties about terms of trade elasticities that would push the estimate down necessarily, it is just as likely to push it up.

You could go to the extreme to get $1,361 million—I am not suggesting that you should, because I think the $600 million is based on the best estimates of those trade elasticities that I can come up with—but to suggest that looking again at the trade elasticities would necessarily push you up or down is silly. Peter and I were discussing this at the weekend, and there is a very strong case for making the wool elasticity in Monash, for example, of minus 1.3 a more negative number which would push the welfare gain up. I have not done that, but both Peter and I would probably agree that that is a sensible thing to do.

The bottom line is that, on all the evidence, the best figure is $600 million, before you take into account the fact that we are not allowing for two additional choices that are affected by this package which will lead to further sources of gain. So $600 million is the lower bound.

Senator FERGUSON—Can I change to a different issue and an important one. On 10 February, after you gave evidence to this enquiry, Mr Murphy, Senator Meg Lees from the Democrats put out a press release entitled 'Consumers big winners from GST-free food'. I will read one paragraph to you, and I would like both Professor Dixon and Mr Murphy to comment later. It states:

> The ACA's evidence follows the evidence from economic modellers Peter Dixon and Chris Murphy last week. Both modellers found that keeping food out of the GST net would not materially affect the long-term economic benefits of tax reform, but would have a substantial positive effect on inflation, economic welfare and equity.

I have looked at both of your submissions and nowhere can I see anything that substantiates those claims made by Senator Lees in relation to making food GST free. Would both of you care to comment?

Prof. Dixon—The result in our report was that there was little impact on economic welfare in the long run—I think that is right—but that in the short run there might possibly be some advantage in leaving food out. It made the labour market transition easier for reasons that I explained last time.

Leaving food out meant that there was less pressure on wages to go up. There is quite a detailed explanation of that argument. It does not mean that you want to do it, but there was some short-run advantage in leaving food out and little measurable long-run disadvantage.

Senator FERGUSON—So you would tend to agree with Senator Lees's statement?

Prof. Dixon—I think it is right, that we found little long-run disadvantage and some short-run advantage.

Senator FERGUSON—I will definitely look through your submission, but I read it and I could not clearly see that anywhere in your submission.

Prof. Dixon—I think if you read the summary at the beginning it makes the points that I am making. Against that, you have to think about all the various things that are left out of our sort of model, which are to do with compliance costs and so on. That actually is covered very well, I think, in Chris Murphy's report.

Senator FERGUSON—In your own submission you say that, in the long run, exempting food has a negligible but negative impact on economic welfare under either labour market assumption. You say that it is 'negligible but negative' on economic welfare. That is in your own submission.

Prof. Dixon—That is what I said exactly, and that is exactly what I have just said again—negligible but negative.

Senator FERGUSON—Mr Murphy?

Mr Murphy—On that issue I get much the same result—taking food out shaves the welfare gain, but not by a lot.

Prof. Dixon—Or you could choose to describe it as negligible but negative.

Mr Murphy—Yes, I would agree with that. The main issue is the simplicity issue, and that is a point which Peter discusses in his paper as well—that taking food out would substantially increase the compliance costs especially, and that is not taken into account in the modelling. So that is something that needs to be considered.

The other issue is the equity issue, of course. The view of most economists—and I cannot speak for Peter—would be that the right instruments for dealing with equity are the income tax and social security systems, not by having special exemptions from particular indirect taxes. It is just a much sharper, more efficient way of dealing with concerns about equity. So my view would be that, because of the simplicity issue—which I have not modelled and on which I am just offering my opinion—food should be left in, and concerns about equity should be addressed through the income tax and social security systems.

Senator FERGUSON—Food should be left in is your view?

Mr Murphy—Yes.

Senator FERGUSON—And should be addressed through the social security—

Mr Murphy—Any concerns about equity should be addressed through the social security and income tax systems, yes.

Senator FERGUSON—The final thing I want to say is that also in this press release Senator Lees says:

Food prices would drop by about 5 per cent if food is taken out of the GST because of the abolition of Labor's hidden taxes—

That, I agree with. She goes on:

This would leave lower and middle income households and consumers a lot better off.

I noticed the other day that ACOSS put out another paper and I saw some publicity—I have not read their submission—where they talk about a trade-off of income tax cuts which would reduce the income tax of low and middle income earners. They use a salary of $38,000. ACOSS said that it would reduce their income tax cuts by somewhere in the vicinity of $700 to $750, which, if it translates into even the five per cent figure that Senator Lees talks about—and I think, Mr Murphy, you used a figure of three per cent—would mean that the average family in that range of income would have to spend something in the order of $14,000 a year, or $280 a week, on currently non-taxed food items in order to be better off by exempting food than they would be if they had income tax cuts. So is that what you mean when you say it is better being targeted through the social security system?

Mr Murphy—I must say I did not quite follow all of the details there. If you take out food, it depends how you make up the revenue shortfall as to what the net effect on equity is. But the probability is that if you take out food it would give more equal outcomes in living standards. I think that is the situation. The point I am making is that, if you do want more equal outcomes in living standards, the better way of doing it is with the income tax and social security systems. The social security system is set up to identify people who are disadvantaged on low incomes, and the income tax system, similarly, is set up to discriminate between people on the basis of their income. So it is really for those two reasons: taking food out would make the system more complicated and, if you are concerned about equity, it is not the way of addressing the issue.

Senator FERGUSON—Mr Chairman, I am prepared to take our questioning after Senator Murray has had a chance to have a go. I know we have seven or eight minutes left, so I would rather let Senator Murray have his questioning now.

Senator MURRAY—Thank you for that. Professor Dixon and Mr Murphy, I would like you to respond only if you disagree with any of the following statements: firstly, neither of you have modelled or can model in any significant way the simplicity and equity issues—

Prof. Dixon—Do you want us to respond immediately?

Senator MURRAY—No. Secondly, making food GST free reduces the CPI cost of ANTS significantly; thirdly, making food GST free reduces any wage pressure dangers significantly; fourthly, making food GST free does not affect any expected GDP growth from ANTS materially; fifthly, making food GST free affects jobs and employment positively; and, lastly, making food GST free has very positive equity effects. If you disagree with any of those, perhaps you would let us know.

Prof. Dixon—I disagree with the first statement. I think our sort of modelling does have things to say about equity. We have not said anything about equity, but we could. So if you would like us to work on equity, I think either one of us could help on that issue, because the key ingredients in a study of equity are what happens to employment, what happens to prices and what happens to incomes, then translating that to outcomes for different types of households. We have the capability of doing that. On the last issue to do with equity, I would really like to reserve judgment. As to the rest of it, I broadly agree with you.

Mr Murphy—I agree with most of the observations. It is probably not the conclusion that you are coming to, I suppose, because of the point about simplicity and the point that there are better methods available for pursuing equity objectives. But the only thing that you said which I would disagree with is the point about jobs and wage pressures. All this modelling assumes that there would be neutral effects on national employment in the longer term. To have the food issue make a significant difference on the jobs question, you do need to start making assumptions about wage blow outs, which I think are quite implausible. On the issue of wage pressures and jobs, I would disagree. But I would broadly agree with the other observations.

Senator MURRAY—Why would you disagree on the wage pressure issue? What Professor Dixon quite rightly has done is put the downside and the upside. He said that the downside is only possible if the wage sector decides to act irrationally and generates higher wage demands which therefore negate the benefits of the package. If, as a result of making food GST free, the CPI was to be reduced from 1.9 per cent to 0.5 per cent—on Treasury's estimates, I think—it would obviously dampen considerably any CPI induced wage demand pressure. It must do.

Mr Murphy—But the income tax cuts have to be smaller as well. So I do not agree that it would affect wage demands. In fact, on my modelling, if you take food out, the long-term effect on real after tax wages is eroded from 1.8 to 1.4 per cent. So this change actually becomes a slightly less favourable development in the labour market.

Senator MURRAY—Then you must surely go to the next point, and that is if you made the income tax cuts only, or largely, at the lower income level, which is where the wage demand would come from, you would surely not have anything but positive effects?

Mr Murphy—I understand that you are making a broad proposition—

Senator MURRAY—I am sorry, I should explain. I did not mean income tax cuts, I meant cuts to the proposed income tax cuts. In other words, they would be reduced at the upper end. I might not have expressed it clearly.

Mr Murphy—Your broad underlying proposition is that if the package were pro-equity, that would lead to lower wage pressures. I am not convinced that is true because wage pressures come from workers at different income levels. But even if it were true, that still does not mean that taking food out of the package is the best way of achieving that pro-equity objective. You could do exactly the same thing by altering the income tax cuts. I come back to the same point, that if you are trying to improve the real after-tax wages of low income earners, a better way of doing it would be to change their income tax cuts, not to make food GST free.

Senator MURRAY—You would say, as a modeller, that to arrive at that judgment you would have to have pretty good models available on likely behavioural responses in distributional terms? That has to be lying behind the econometric consequences of particular decisions.

Mr Murphy—In terms of the first part of my answer about whether the package is pro-equity or not and whether that will have an effect on wage pressures, my observation is I am not sure whether it would or it would not. I have not done any modelling of that issue so I cannot give you a definite opinion on that.

On the second question, I do have an opinion on that. If your objective is to reduce any risk that you might see of wage pressures for low income earners, it seems to me that it does not make any difference how you do that, whether you do that by taking food out or by increasing income tax cuts for low income earners. That is what I was getting to.

Senator MURRAY—I had better move on because we are short on time. I want to prefix my next question with a compliment to both of you because you have been able to contest these ideas without tearing each other's throats out. That is to your great credit and it has been very helpful for me to hear your discourse.

What I have drawn out of today's discussion, fundamentally, is really Professor Dixon's summary, and that is that whilst you two differ on the range, you are in broad agreement as to the conclusions. Really, it is the range which is material to our decisions, but is also the broad conclusions.

What I am leading to is as follows: it seems to me that much of the modelling reflects the sensitivity of modelling assumptions. That may seem an ordinary thing to say, but if you alter or shift your position at all, it has quite significant effects. I want to ask you this question, Professor Dixon, and whether these answers just reflect the sensitivity of modelling assumptions or have some deeper meaning. In your December paper at page 14, your welfare reduction was minus 0.28 per cent of consumption, which was minus $850 million. Chart 3 of your January paper had the welfare reduction at minus 0.01 per cent, which was minus $30 million. Today I understood that it had moved from minus $30 million to plus $220 million. I do not take issue with any of that because my assumption is that is just fiddling around with the sensitivities, but can you react to those shifts, as I have seen them?

Prof. Dixon—This tax reform has many bits to it, so there are many pluses and minuses being added up. Small variations in the weight that you are giving to this plus or to that minus lead to differences of the type that you are talking about.

You know that you might be able to estimate two big numbers quite well. There is a big plus from levelling the indirect tax system, or whatever. There is a big minus from everyone paying higher indirect taxes. There is a big plus from people paying lower income taxes and so on. So there are big pluses and big minuses, and while you might be able to estimate each of them reasonably well, estimating the difference between them with the two numbers estimated being subject to error—the pluses subject to error, and the minuses subject to error—is then subject to big percentage errors. But the important thing that is coming through from all of this as we battle this thing out and learn from each other—that is, Chris and me—and as we change some parameter values, is that these numbers are staying small, in my view.

You should judge whether it is big or small. We are talking about a major reform of the tax system. We are talking about numbers that are varying from negative 0.3 per cent to plus 0.3 per cent. I thought that everybody would accept that as being small, especially in view of all the rhetoric in the election campaign about how this was going to be absolutely essential to Australia's long-term economic growth prospects and so on. Well, we have not found any evidence to support that proposition. All we have found are pluses and minuses of these tiny numbers.

Senator MURRAY—Professor Dixon, I want to come to the important credit Mr Murphy gave to your modelling approach, that you do pick up the short-term transitional movements year by year. I think Senator Cook came up with a good analogy with the pond of water. We know it starts still and it ends still but, in between, somebody might have drowned because it got disturbed. You have to be concerned if somebody is going to get drowned.

The very big assumptions which commonsense would indicate are likely to be implausible in a practical sense—I do not mean that in a foolish manner, I mean in a practical sense—are assumptions such as employment eventually evening out. We know that in the long term if you get rid of slavery, or whaling, or woodchipping old-growth forests, or tariff reductions, eventually people find something else to do. That is in the long term. But in the short-term there is a lot of agony.

Our assumption is that somebody living in Kalgoorlie might quite easily move from losing an accommodation job to gaining a goldmining job. But somebody living in Noosa who loses an accommodation job might find great difficulty in getting a coalmining job up in Tieri, hundreds of kilometres away. Therefore, the short-term transitional effects are very material. For us, as a committee, we have to attend to compensation effects which are relative to the short term because that is what impacts on the psyche and on politics, and not what is relative to the long term. How do you respond to that proposition?

Prof. Dixon—You are absolutely right, we should think about these short-term effects. I have analysed these things to a limited extent. I have given you two labour market scenarios, one in which the short-term effects are reasonably positive. But I kept on emphasising that they are reasonably positive because of an overall cut in taxes, not because of the change in the indirect tax system. The other scenario is one in which the short-term effects are quite strongly negative.

Senator MURRAY—The other implausible assumption I want to put to both of you is the assumption that Treasury, you and Mr Murphy have all agreed with—that is, that exchange rate appreciation will result in an automatic balancing of the effects of this package. I think the figure used was 3.5 per cent, although you might have used four per cent. If that had been true for any country which improved its export performance, it would never have got any gains from it. Whilst I understand what has driven the modelling approach mathematically and so on, I find it difficult to conceive that, with all the business people saying that the ANTS package will actually make them more money and more sales and help them to do better with exports, the exchange rate appreciation will automatically knock that out. To a practical person, it just does not fit.

I think this is a key issue with you, because what you have both arrived at—and Treasury—is that the effects of this ANTS package are positive, even where you make what is to me an extraordinary assumption about the automatic appreciation of the dollar. The dollar moves for far more reasons than are spelt out in the ANTS package. I would like you both to address the plausibility, the believability, of that automatic adjustment.

Prof. Dixon—This all comes down to what you think determines the balance of trade. Making yourself more competitive, getting your costs down, doing something good like reforming the wharves and so on, does not necessarily improve your balance of trade. Your balance of trade largely depends on the desirability of your country for foreign investment. That is where we are coming from really.

If you do something good for your economy, the balance of trade is likely to deteriorate, not the other way around. If you do something good for the economy, people want to lend you money and that appreciates your currency. That is the sort of logic that is going on here. You have reformed the tax system; you have got costs down. If you really thought that was going to permanently increase exports relative to imports, you must be thinking that your tax reform has done either of two things: increased the amount that you wanted to save or reduced investment opportunities, and neither of those things seems right.

Senator MURRAY—But, in the long term, Professor, countries do change the relationship between exports and imports.

Prof. Dixon—Yes, and that is mainly because they change the desirability of their country for investment or they change their savings behaviour. Those are the critical determinants of your long-run movements in your exports relative to your imports.

Senator MURRAY—So you are saying that, for this package to really work successfully, the next effort by the government has to be on savings?

Prof. Dixon—No, I think that is different from this package. If the nation makes a decision that they want to have a lesser current account deficit, if that is what we want to do, then the clear way to do it is to have more saving, and the way to do that is to actually run the public sector budget further into surplus. In fact, this package goes in the opposite direction.

If you want to 'improve' the trade accounts—and I am not meaning to make a judgment that that is a good thing to do—then the clear way to do it is to increase saving. There are silly things you could do which make the country less desirable for investment. Surprisingly enough, that would improve the trade accounts.

Mr Murphy—To put the proposition simply, what the modelling is saying is that production costs are lower, and in response to lower production costs you would expect the exchange rate to be higher. The problem that the lay person usually has with that is, 'The exchange rate moves around all over the shop from one day to the next. How can you make a statement like that?' The reason we can make a statement like that is that we are making a statement about where the exchange rate would be compared with where it would otherwise be, not how it moves from one day to the next. So if you have a package like this which does have these cost reductions, logically that does mean the exchange rate will be higher than it would otherwise be. It will still move around all over the place, for the reasons that it would have done anyway, but it will be higher.

There is another issue you raised with Professor Dixon before that I would like to make one comment on. That is that this argument that there are sort of pluses and minuses in the welfare gain, and what does it all add up to and who knows, is very overstated. The average tax economist would look at this problem in the following way. They would say, 'You are moving to a more neutral tax system. That will lead to more efficient economic choices. Let us add up all the gains in that.' That is basically how they would look at it.

From my modelling, if you do that exercise, allowing for four out of those six choices, the answer you actually get is $1,361 million. These models have this terms of trade effect in them we talked about, which is a point that Peter has emphasised. Once you allow for that, it brings you back to $600 million. That is not an effect most economists would usually even think about in this context. What Peter's modelling demonstrates to me is that you really need a very strong terms of trade effect—an implausibly strong one, when you think through its policy implications—to get down to anything like a negative number.

The other thing you have to think about is the two out of six choices that have been left out. So I think the way you should think about it is that $600 million plus this terms of trade point that Peter has introduced is a good point but it is not really convincing in terms of changing the answer that nine out of 10 tax economists would give you, that this is a welfare increasing change in Australia's tax system.

Senator MURRAY—Mr Chairman, I can go on for ever, but I presume you do not want me to.

CHAIR—I think all of us can.

Senator MURRAY—Can I put a question on notice?

CHAIR—Indeed.

Senator MURRAY—Thank you.

Senator GIBSON—Professor Dixon, you made the point earlier, as you did the week before last, about the thesis that the indirect tax system, the present structure, would continue to raise the same proportion of GDP. It was one of the charts you showed again today. I just bring to your attention that Budget Paper No. 1, on page 5/23, shows that in 1987-88 indirect taxes were 7.8 per cent of GDP and have reduced down to 6.1 per cent of GDP in the 1998-99 estimates, and were 6.2 per cent for the last financial year, or, as a proportion of Commonwealth revenue, they were 28.5 per cent in 1987-88, coming down gradually to the estimate of 24.2 per cent this current financial year. That is hard evidence that indirect taxes, certainly for the Commonwealth, are going down. Isn't it also true that 15 months ago all the state premiers signed off with the Prime Minister that they wanted to get rid of FIDs and BADs—

Senator SHERRY—And payroll tax.

Senator GIBSON—and stamp duties on financial transactions in order to make Australia more attractive as a financial centre in this part of the world? So in terms of the thesis that we could keep going with the present mix of indirect taxes, I would suggest—I know it has nothing to do with your modelling—there is a fair bit of evidence that we have got to do something about the mess we have.

Senator CONROY—There is $4 billion in tariff reductions.

Prof. Dixon—You have to think about what was happening to the rates of indirect taxes, which I have not looked at from one year to the next. And as Senator Conroy pointed out, you have got to think about the cuts in tariffs. In those projections I made there were no further cuts in tariffs. There were no further cuts in any indirect taxes—

Senator CONROY—That is where the majority of the fall comes from.

Prof. Dixon—Is that where it comes from?

Senator CONROY—It is over $4 billion. It is a discretionary decision—

Senator FERGUSON—Senator Conroy tries to answer questions all the time—just ignore him.

Senator CONROY—That is why it is falling in proportion to GDP.

Senator FERGUSON—Just ignore him.

Prof. Dixon—No, he is actually very helpful, I think.

Senator SHERRY—He always is.

Senator FERGUSON—He never gets a chance sit on the other side of the table.

CHAIR—Everyone has been pretty good today, so let us keep it that way.

Prof. Dixon—On the FIDs and BADs, I have assumed that they stay in place. It would be nice to analyse, not in the broad-brush way that economy wide models do it but in some detail, exactly what the effects are of these FIDs and BADs, and other stamp duties and so on. We just have not done it. Senator, I do not think the figures that you have quoted seriously challenge the idea that, in the longer term, the present indirect system would raise revenue at roughly the rate of growth of GDP if there were no changes in the rates.

Senator GIBSON—I am just quoting you the facts, that they are going down as a proportion of the economy.

Prof. Dixon—But they went down for identifiable reasons; they went down because there were changes in the rates.

Senator GIBSON—The rates went up, in fact.

Senator CONROY—The tariffs—

Senator GIBSON—The tariffs have gone down.

Prof. Dixon—Tariff rates went down quite sharply.

Senator GIBSON—Let me just quote this to you. Customs duties have gone from 1.2 per cent of GDP to 0.6, so that is 0.6 difference, of GDP. But over the same 11-year period we have total tax going from 7.8 to 6.1—that is 1.7 per cent. The rates in fact have gone up. The Labor Party put up the rates of wholesale sales tax.

Prof. Dixon—No, the fact that, say, tariffs went up as a share of GDP does not say that the rates went up. It just says that imports grew rather rapidly relative to GDP. The truth of the matter is that imports grow at about twice the rate of GDP.

Senator GIBSON—Sure.

Prof. Dixon—I think that needs really careful analysis. I have mentioned this repeatedly, that this is exactly the sort of work that the Treasury should have done.

Senator SHERRY—We have asked them. We do not get it.

Senator CONROY—They keep insisting they have not done it, they are not going to do it, they are not interested in doing it.

Prof. Dixon—I cannot understand how they can be analysing this thing in any sort of complete way without—well, I do not want to dispute this thing very strongly, but it just seems to me that you could know the answer to this question that you want to know.

CHAIR—Further questions? Senator Conroy.

Senator FERGUSON—Mr Chairman, I raise a point of order. We said when we started that we had three hours. We have already gone over three hours. The time allocated for questions was divided up evenly—half an hour for you and half an hour for the government and time for Senator Murray. We have not used all of our time. I am bearing in mind that it is 11.30. Some of us have further appointments. I think if Senator Conroy has any further questions, because the Labor Party have had their half an hour of questions, then, like Senator Murray, he should put his questions on notice. There is not much point in having an agreement to finish at 11.30—that is the time you said earlier—if we do not stop then. I think it is unreasonable on the rest of the committee who have made other appointments.

CHAIR—You are absolutely right, I divided the time up. I have not adhered strictly to the time. For example, Senator Murray did go over. That is in part compensated by the fact that Senator Harradine has left and has not asked any questions.

Senator FERGUSON—And that we did not use up our full portion of time.

CHAIR—You did not use up your full amount of time.

Senator FERGUSON—Because we knew we had to finish at half past 11.

CHAIR—I am conscious of the fact that if I extend the right to one committee member I have to extent it to all. I do think in the circumstances it is useful to the harmony of the committee if I extend some time to Senator Conroy to ask a couple of questions.

Senator FERGUSON—Mr Chairman, I disagree. He has asked questions virtually the whole way through the inquiry, if the truth be known, especially when you were asking questions. In fact, half past 11 is the time, Senator Murray has to go, we have other appointments and I think that we should be concluding the proceedings now.

Senator CONROY—The problem arises—and this is in no way critical of Mr Murphy; I am quite happy to hear from Mr Murphy at length, which we did—because Mr Murphy took over an hour. As I said, I have absolutely no problem about that. But there has been no other presentation that has eaten up close to half the available time—

Senator FERGUSON—Yes there has.

Senator CONROY—and then not had questions afterwards.

CHAIR—If we are going to argue about this we are going to eat into the useful time of the committee.

Senator FERGUSON—It is not being fair on members of the committee who have made other commitments, because we are already half an hour later than the appointed time. I do not intend to miss those appointments and I do not think any of my colleagues would do that either. We would be inquorate if we walked out, and I do not want to do that. I think if Senator Conroy has any questions, then he should put them on notice, in the same way that Senator Murray did.

CHAIR—Can't we just show a reasonable bit of commonsense here and allow a couple of questions from Senator Conroy?

Senator FERGUSON—I cannot see why. He has the option of putting them on notice in exactly the same way as Senator Murray. Senator O'Chee has questions that he would want to put on notice, and we have not used all of our available time.

CHAIR—Yes, and I have questions that I want to put on notice. I have 1,001 questions that I have not asked which I would like to ask.

Senator FERGUSON—We should have allowed 10 hours.

CHAIR—Maybe we should have, but against my better judgment, nonetheless, the Senate made a decision about our reporting time, which cramps us. It seems to me that while we are here and we can take some reasonable chance to pursue the inquiry, we should pursue it. If we cannot pursue the inquiry then that is fine, we will have to break off and make do with the best we can. I understand your point; it is a reasonable point. I do not, in any sense, derogate from that. I think, though, that it would be sensible to make the provision that I have suggested.

Senator FERGUSON—Quite simply, we do not agree to the provision, Mr Chairman.

CHAIR—In which case, you will have to disagree with me.

Senator FERGUSON—Our only other option is to leave, which we will have to do and then you will not have a quorum.

Senator SHERRY—That is not right.

Senator FERGUSON—You must have the majority of the committee here.

Senator SHERRY—You had better leave someone to call the quorum.

Senator CONROY—Unfortunately, if you leave someone you have a majority of the members.

Senator FERGUSON—You cannot continue without a quorum.

CHAIR—I cannot continue without a quorum. If there is no quorum, I cannot continue. That is absolutely right. You have actually put me in a situation of having to decide against what I think is my better judgment. That is not the position I want to be in.

Senator CONROY—The government is running scared again.

Senator FERGUSON—Not from you, Senator Conroy. That would be the last thing.

Senator CONROY—You are closing the committee down to avoid—

CHAIR—The meeting will lapse. In closing the meeting I indicate that we have received a letter which will be dealt with by the committee. It is a letter that deals with one of the references that one of the committee members used in questioning a witness. We will not deal with it now because it is appropriate that the committee have a chance to check the reference. The meeting is now lapsed for want of a quorum.

In closing the meeting, while we still have the benefit of *Hansard*, albeit the status of the quorum is in question, could I thank both Mr Murphy and Professor Dixon for their time today, for the effort they have put into giving evidence and the courtesy which they have displayed towards the committee. I would like that to be recorded and I am sure it is agreed. Thank you.

Committee adjourned at 11.38 a.m.