



COMMONWEALTH OF AUSTRALIA

# Official Committee Hansard

## SENATE

SELECT COMMITTEE ON A NEW TAX SYSTEM

**Reference: A new tax system**

THURSDAY, 17 DECEMBER 1998

CANBERRA

BY AUTHORITY OF THE SENATE

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**SENATE**  
**SELECT COMMITTEE ON A NEW TAX SYSTEM**  
**Thursday, 17 December 1998**

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

**Participating members:** Senators Brown, Harradine and Margetts

**Senators in attendance:** Senators Brownhill, Chapman, 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	<p>The impacts of the Government's taxation reform legislation proposals on the living standards of Australian households (especially those on low incomes), including:</p> <p>(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 <i>bona fide</i> charities;</p> <p>(b) a detailed examination of the zero-rating of health services, including an examination of which services should be zero-rated;</p>

	<ul style="list-style-type: none"> <li>(c) the effects on community sector organisations of changes to their tax exempt status, and of the compliance costs of the proposed tax arrangements;</li> <li>(d) the effects of the proposed private health insurance rebate;</li> <li>(e) the effects on people with disabilities;</li> <li>(f) the effects on public, community and private housing, including the levels of rents; and</li> <li>(g) options for amendments to improve the fairness or efficiency of the proposed legislation.</li> </ul>
<p>Employment, Workplace Relations, Small Business and Education</p>	<p>The employment incentive and education impacts of the Government's taxation reform legislation proposals, including:</p> <ul style="list-style-type: none"> <li>(a) the scope and effectiveness of the proposed zero-rating arrangements for education in maintaining its quality, accessibility and affordability;</li> <li>(b) the effects on employment;</li> <li>(c) the effects of the proposed GST treatment on the quality, accessibility and affordability of employment services;</li> <li>(d) the effects on education of imposing a GST on, or zero-rating or exempting books and associated education resources;</li> <li>(e) the effects on education of imposing a GST on ancillary resources, services and commercial activities, including the effects on overseas students;</li> <li>(f) the effects of the proposed changes to the tax system on employment;</li> <li>(g) the effects on wage costs, particularly if the basic necessities of life are taxed;</li> <li>(h) the scope and effectiveness of changing the unemployment benefits, pensions and Newstart Allowance 'tapers';</li> <li>(i) the effects of the proposed changes to the tax system on training and adult education; and</li> <li>(j) options for amendments to improve the fairness or efficiency of the proposed legislation.</li> </ul>
<p>Environment, Communications, Information Technology and the Arts</p>	<p>The broad effects of the Government's taxation reform legislation proposals on the environment, the arts and information technology, including:</p>

- (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**

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**Committee met at 9.08 a.m.**

**CHAIR**—Today the Senate Select Committee on a New Tax System commences the first stage of its inquiry into the proposed changes to the tax system. During the first stage of the inquiry the committee will focus on the economic theories, assumptions, calculations, projections, estimates and modelling which underpinned the government's proposals for taxation change.

In the second stage of the inquiry the committee will examine 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.

This matter was referred to the committee by the Senate on 25 November 1998. The committee expects to report on this first stage by 18 February 1999. For three related inquiries—by the references committees on community affairs; employment, workplace relations, small business and education; and environment, communications, information technology and the arts—the scheduled reporting date is 31 March 1999. This committee will then report on the second stage of its inquiry by 19 April 1999, taking into account the findings of the references committees.

This committee has called for submissions and has so far received about 50, even though the closing date for submissions is 29 January 1999 and we have not reached that date yet. This is the first public hearing to be held by the committee in the course of this inquiry. In addition to this hearing, the committee will be conducting other public hearings in the capital cities and in some major regional centres.

The committee does not intend to release submissions as yet, except for the submission by the Treasury, whose representatives will be giving evidence this morning. Is it the wish of the committee that the Treasury submission be made public? I now declare that the submission to this inquiry by the Treasurer, together with its attachments, be a public document.

For the record, this is a public hearing and as such all 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 special rights and immunities attached to the parliament, or its members and others, necessary for the discharge of the functions of the parliament without obstruction and without fear of prosecution. Any act by any person which 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.

[9.12 a.m.]

**HENRY, Dr Kenneth Ross, Executive Director, Economic Group, Department of the Treasury**

**JEPSEN, Mr John, Chief Adviser, Commonwealth-State Financial Reform, Department of the Treasury**

**McCULLOUGH, Mr Paul Andrew, General Manager, Indirect Tax and Payment Design Division, Department of the Treasury**

**SIMPSON, Mr Peter Ernest, Second Commissioner of Taxation, Australian Taxation Office**

**SMITH, Mr Greg, Executive Director, Budget, Department of the Treasury**

**TUNE, Mr David John, Executive Director, Department of Family and Community Services**

**CHAIR**—I welcome Mr Greg Smith and the Commonwealth Department of the Treasury. Would you please introduce the other members of your team.

**Mr Smith**—I would like to mention at the outset that the terms of reference even for this stage of the inquiry are potentially very wide.

**CHAIR**—Excuse me, Mr Smith, before you lurch into what you want to tell us, which we are all ears to hear, would you mind introducing for the parliamentary record the other members of your team.

**Mr Smith**—There was actually an intro to that, if you don't mind.

**CHAIR**—Okay. Play it as you wish.

**Mr Smith**—There are certain matters I want to get on the record relating to the attendance. For that reason, as discussed with your secretariat last week and earlier this week and as indicated in my letter to the inquiry on 11 December, we have asked along a number of officers not only from the Treasury but also from the Australian Taxation Office, led by Mr Peter Simpson, who is one of the people present at the table, and Mr David Tune, who is also present, from the Department of Family and Community Services.

The Treasury people present are, first of all, Dr Ken Henry. I would like to mention that Dr Henry is no longer responsible for taxation policy matters in the Treasury. However, we decided earlier this week that it would be of assistance to us and the committee if he could attend. Dr Henry is on leave, but we have recalled him for the purposes of attending this morning. Dr Henry was previously the head of Treasury's tax policy group but is now the Executive Director, Economic Group, in the Treasury. The other representatives from the Treasury at the table are: Mr John Jepsen, who is Chief Adviser of Commonwealth-State

Financial Reform, and Mr Paul McCullough, who is General Manager of the Indirect Tax and Payment Design Division of the Treasury.

As I said in my letter to the committee yesterday morning, we have other officers of the Treasury present but, because I really do not know the full possible direction of the inquiry this morning, we obviously cannot have all of those people sitting at the table. We will call them if necessary.

**CHAIR**—Thank you, Mr Smith. Please proceed.

**Mr Smith**—The Treasury has, as you indicated in your opening remarks, provided a submission. I do not wish to say anything further about that submission at this time so that we can maximise time with questions.

I would like to, however, also refer to the fact that we have received a number of other requests from members of the committee. We are treating those requests in the usual way as questions on notice and dealing them with as expeditiously as possible. However, the requests are extensive and could in some cases require very considerable work for us to complete. Moreover, it is necessary for consideration to be given to whether it is appropriate to meet all of those requests, having regard to the usual conventions and having regard to the impact on the Treasury's ongoing workload. In that respect, it will often be necessary for us to seek direction from the Treasurer, given his administrative responsibility for the department.

We are unable to give answers to particular requests we have received today, but they are under consideration. I do have answers to a small proportion of the questions on notice relating to the effects of the existing tax package and the existing tax system. I will give you those today. That is, as I said, just some procedural comment I want to make at the start. I will not make any substantial comment.

**CHAIR**—Just on that procedural comment, one of the requests that you no doubt have in front of you was from me asking if you would not mind running through your PRISMOD model and a number of differing but reasonable assumptions to see what the answers would be. Is that one of the issues that needs to be referred to the Treasurer for a ruling?

**Mr Smith**—Yes, we will provide Treasury assessments of the existing tax system and Treasury assessments of the tax package as best we can, and I do not make that as an uncaveated commitment, because, in the various inquiries going forward, I do not yet know what those requests may prove to be, but they are the ones we can give. Those questions which seek from us completely new analyses, completely different assumptions or completely different time frames—which some of these questions did—are the ones that we would be put to significant work to answer and we would need to give consideration to those. They are the things we will be considering.

**CHAIR**—If I may ask, when might you be in a position to give us an answer on whether you will be able to proceed to provide that information or whether there are other considerations and you will not be able to provide it either in whole or in part?

**Mr Smith**—I can give you, as I said, some answers today to the other matters, but I cannot give you an answer to precisely when I can give you those other responses. It cannot be today. I would expect it to be quite soon. I expect we could well do it before Christmas, but I would not want to be committed to a date.

**CHAIR**—I appreciate that, but we do have a very quick turnaround time for the report of this committee. In order to get our work done, we need to have an apprehension of when information might be obtainable, but I will leave it there for the time being. I think you have answered that as best we can reasonably expect at this moment, Mr Smith. Please go on.

**Mr Smith**—I have finished, as I said, my procedural opening remarks and I am happy now if the committee would like to go to questions.

**CHAIR**—You do not wish to address us on your submission?

**Mr Smith**—No, I thought the submission was self-explanatory and we would go to questions.

**Senator FERGUSON**—Mr Chair, if I could make a comment on procedural matters prior to any questions being asked.

**CHAIR**—Certainly.

**Senator FERGUSON**—I was concerned that public comment was made about the conduct of this inquiry prior to us even attending our first meeting of public hearings. Comment was made yesterday about the quality of witnesses who were to be brought to us today by Treasury and their capacity to answer questions in relation to the proposed inquiry.

I think it was unfortunate that Treasury officials were reflected upon because, until they are asked the questions, the committee has no idea whether they have the capacity to answer all of the questions that are asked of them. I think it was wrong for a member of the committee to publicly state his position in regard to the availability or unavailability of certain Treasury officials when in fact no knowledge could possibly have been gained as to whether or not the Treasury officials who were to be present could have answered all of the questions put to them.

I want to place on record my concerns. I can only assume that the senator concerned made these public pronouncements with your knowledge, Mr Chair. I am concerned for future hearings if the credibility or the quality of witnesses is prejudged before they have even been asked questions. I think it puts into doubt the veracity of some of the findings of the committee.

Can I also place on record that, in relation to this inquiry, it is normal for Senate inquiries to have terms of reference, to seek submissions, to gather the evidence and to have public inquiries. Then at the end of that time they determine what their position is in relation to all of the evidence that is received and make certain recommendations after hearing all of that evidence. This committee is unique in that the Australian Labor Party comes with a predetermined position of opposition to the legislation and the proposed tax reform measures

that have been put in place by the government. With that predetermined position, I think we need to be careful and make sure that, in relation to all of the evidence we hear, all other members of the committee draw their conclusions at the end of the inquiry rather than at the start.

The government has its position. The legislation has been put into place, so the government's position is quite clear. The Democrats have a half predetermined position. During the election, they announced that they would take a particular stand in relation to food and the consumption tax. Knowing Senator Murray as well as I do, I think he will be listening carefully to all of the evidence to make sure that everything he hears ties in with what they believe or what he hopes to find at the end of the inquiry.

I did want to put those things on the record because, as a Senate committee that is going to have a number of hearings over a long time with a number of witnesses, we do not want to jeopardise the inquiry by having public comments. I always understood that, as far as Senate committees are concerned, the chairman is the person who makes public comments, not other members of the committee.

**CHAIR**—I take that as a statement by you personally, Senator Ferguson. Any matters arising from it that I would want to deal with, I am happy to deal with in a private session. Are there any other comments any members of the committee would wish to make on a procedural matter?

**Senator CONROY**—Could I respond to one point that was made. Unfortunately, Senator Ferguson is misinformed about the comments that I made yesterday. At no stage did I reflect on Mr Smith. In fact, I went to quite a deal of trouble to express confidence in Mr Smith. It is disappointing that Senator Ferguson has chosen to not quite get the whole story before he decided to make a grandstand performance at the opening of the committee.

**CHAIR**—I will rule this matter off at this point. Any other elements about it can be taken up within the private meeting we have scheduled for today. I have one quick comment I would make. Senator Ferguson, you said something about the Labor Party's position. That is the Labor Party's position, but that does not automatically lead you to assume that that is the position of senators who have been given an obligation by the Senate to deal with these terms of reference. As for your own party, that is a matter for you to comment on. Is there anything of a preliminary nature first? If there is no more, I call Senator Ferguson for questions.

**Senator FERGUSON**—I do not have any preliminary questions to Treasury.

**CHAIR**—You have no questions to Treasury?

**Senator FERGUSON**—Not initially, no.

**CHAIR**—Not initially? I call Senator Conroy then.

**Senator CONROY**—Mr Smith, could you please outline the membership of the taxation task force which developed the options for the tax package?

**Mr Smith**—As you will appreciate, I was not involved at that time, but my understanding is that it was representatives of the Treasury, the Prime Minister's department, the tax office, the Treasurer's office and the Prime Minister's office.

**Senator CONROY**—Would you be able to name all of the officers involved?

**Mr Smith**—I could not actually do that at the moment.

**Senator CONROY**—Could you identify the key personnel of the committee?

**Mr Smith**—The key person was the chairman of the group, who, as you know, was Dr Henry.

**Senator CONROY**—Were there any other key personnel, or would you regard Dr Henry as—

**Mr Smith**—He was the person responsible as chairman of the task force.

**Senator CONROY**—Would you be able to take the names on notice and provide the committee with them?

**Mr Smith**—I am not sure the membership was always the same. That is another hesitation I have, but I will take it on notice.

**Senator CONROY**—You mentioned a moment ago that you had no role with the committee at all. You did not attend any meetings.

**Mr Smith**—The task force, no. I am the chairman of a subsequent task force, a quite different task force, that currently operates.

**Senator CONROY**—I understand that. Do you know how often the meetings of the task office were held?

**Mr Smith**—No.

**Senator CONROY**—Do you know Rick Matthews, Bruce Quigley or Nigel Bailey at all?

**Mr Smith**—Do I know them?

**Senator CONROY**—Yes.

**Mr Smith**—Yes.

**Senator CONROY**—They were involved in the task force?

**Mr Smith**—I do not know that.

**Senator CONROY**—The Treasurer acknowledged in parliament their enormous time and effort in that task force process.

**Mr Smith**—I think there may have been formal members of the task force or people who perhaps were regarded as leaders of various organisations in the task force. I know the origins of the Treasurer's comments. Those people were thanked also for their significant work in putting together the legislation for the package. The Treasurer made those remarks when introducing the legislation.

**Senator CONROY**—Would you agree that they could be defined as key members of the task force?

**Mr Smith**—I would not want to make comments of that kind. The word 'key' is probably a leading word, and I do not think it is a helpful one in the setting.

**Senator CONROY**—Are they available to give evidence to the Senate committee if required?

**Mr Smith**—Yes, they are.

**Senator CONROY**—Moving on to PRISM, what does the PRISM model actually do? What does it measure?

**Mr Smith**—Although I could give you an official answer, it would be easier to go straight to Dr Henry.

**Senator CONROY**—Welcome, Dr Henry.

**Dr Henry**—PRISM is a very highly detailed price input-output model of the Australian economy. It traces inter-industry linkages in the Australian economy. We use it to calculate the impacts on the prices of a range of commodities—up to about 1,200 different commodities—the industry costs for 107 producing industries and the revenue effects of a whole range of indirect tax changes.

The model has a very detailed specification of the Australian indirect tax system by type of tax and by purchaser of the commodity, whether that be a final consumer, business purchasing a commodity for investment purposes or government purchasing a commodity for consumption or investment purposes or indeed whether the commodity is being exported. In turn, there is a complete specification of the taxes applying according to the type of commodity which is being purchased. I think it is the most detailed input-output model in existence. That is what it is used for: to calculate price and revenue impacts of indirect tax changes.

**Senator CONROY**—You do not keep that one in your head as well, do you?

**Dr Henry**—No, Senator, I do not. That is some hundreds of thousands of equations.

**Senator CONROY**—Your memory is good today?

**Dr Henry**—I would ask you to keep in mind that I am on leave, Senator. I may have relaxed a bit.

**Senator CONROY**—That is a fair comment. Is PRISMOD a public model? Are people able to get a copy and look at it?

**Dr Henry**—We have never actually made PRISMOD publicly available in the sense that people can get their hands on the model and have a look at it. But PRISMOD is quite fully documented, and the documentation is in the public domain so that people can at least understand the conceptual basis and all of the analytics which lie behind PRISMOD. PRISMOD, of course, is written in electronic codes. It is an electronic device—software, if you like. We have not actually made that software available to anybody.

**Senator CONROY**—Would you say it has been subjected to some rigorous analysis from academics and others? Has there been the opportunity for them to do that?

**Dr Henry**—I think I would put it this way: there would be no other model of the Australian economy that has been subjected to so much intense public scrutiny as PRISMOD.

**Senator CONROY**—Are you aware of any of the scrutiny that has been published from these academics or others that you could refer us to? You can take that on notice if you just cannot remember the specifics.

**Dr Henry**—There have been countless references to PRISMOD in academic and other circles over a large number of years. No particular reference stands out in my mind.

**Senator CONROY**—Do you know of, or have you heard of, Professor Ken Wallis, the Director of the UK Macroeconomic Modelling Bureau?

**Dr Henry**—I have heard of him.

**Senator CONROY**—He has advised the committee that for a model to be credible it needs to be transparent, and that means that it should be published and the limitations of the model should be explicitly stated along with the degree of margin of error in the model and the assumptions on which the inputs to the model are derived. Are you aware of any analysis along those lines of PRISMOD?

**Dr Henry**—I would suggest that PRISMOD fully satisfies all of those conditions. PRISMOD has certainly been documented, and that documentation has been made public, as I indicated earlier. That documentation covers each of those points that you have mentioned.

**Senator CONROY**—Is it true that PRISMOD does not estimate the macro-economic impacts of the tax package?

**Dr Henry**—That is quite correct, Senator.

**Senator CONROY**—So this model has no way at all of saying GDP growth is going to be X, Y or anything like that?

**Dr Henry**—That is correct.

**Senator CONROY**—Does Treasury have other models that would do that?

**Dr Henry**—Treasury does have a macro-econometric model called TRYM. However, Treasury does not have a model, nor do I believe one is in existence anywhere in the world, which could be used to assess to the satisfaction of Treasury the full macro-economic implications of the particular tax package that is before this committee. There is no model in existence which simply has the ability to comprehend all of the detail of this particular package. In fact, although a number of studies including assessments of the macro-economic impact of the package have been made, each of those have been, by their nature, partial studies. They have omitted in most cases considerable important detail in the government's package.

**Senator CONROY**—So there is no model that would come close or that you would say is not bad?

**Dr Henry**—Of most of the mainstream dynamic computable general equilibrium models that are in existence, you could say that this might give us a rough order of magnitude, no better than that.

**Senator CONROY**—I am just struggling to come to terms with the fact that we have this massive tax package and Treasury has no way of modelling its impact on the economy.

**Dr Henry**—You can put that down to limitations on the capacities of the economic profession in general.

**Senator CONROY**—So Treasury has not attempted to create a model to do this, commissioned work or looked overseas?

**Dr Henry**—We have not attempted to develop a model which would be capable of analysing this package, and that is really for the reason I have already indicated. No such model exists anywhere else—nothing that we would say is quite up to the task, given the complexity of the package. However, we have commissioned work to give us rough orders of magnitude of the sorts of effects one might expect on key macro-economic variables, like GDP in particular, of packages which contain some of the elements of the package that is before the committee.

We are prepared to make use of some of the dynamic computable general equilibrium models that are out there, that are in existence. We do not see the need to build our own. Frankly, we do not think we could build a better one than exists. So we would not consider it to be an appropriate use of taxpayers' funds to build one ourselves. We are prepared to make use of those models. But, at the end of the day, we would not expect that those models could give us any precision in relation to the impacts on, for example, GDP or employment

of a package as comprehensive and, from a modelling perspective, as complex as the package which is before the committee.

**Senator CONROY**—You indicated you had commissioned, did you say?

**Dr Henry**—We have tendered the results of one such piece of analysis as evidence.

**Senator CONROY**—That is Murphy, which you have supplied to us?

**Dr Henry**—That is correct.

**Senator CONROY**—But that was not a model of the package. The package did not exist.

**Dr Henry**—As I have already indicated, I do not believe there is any modelling of the entire package in existence.

**Senator CONROY**—What does TRYM do? For those of us who are not experienced in this area, what is your TRYM model?

**Dr Henry**—TRYM is a dynamic macro-econometric model. It does not have the level of detail that is typically found in the other class of models that I have referred to, those that go under the title of a computable general equilibrium model. It certainly does not contain the level of richness of detail that you find in a static model like PRISMOD, for example, which, as I have indicated, is designed to capture inter-industry flows. TRYM is not designed to capture inter-industry flows. TRYM is a model which we find useful for making projections about the likely behaviour of gross domestic product and of employment—of key macro-economic variables.

**Senator CONROY**—You obviously have some confidence that the Murphy model you have commissioned is at least the best available, given that you commissioned it?

**Dr Henry**—I feel a little uncomfortable indicating whether we consider it to be the best available. We certainly consider it good enough to use. If we thought there were a better model out there to use, we would use it.

**Mr Smith**—I will just interpose something there, Senator. We use it to obtain indicative information, not to provide specific quantitative estimates. A critical fact here is that the government has not provided, and we have not given to the government, specific modelled predictions of most of these macro-economic effects. That is a deliberate decision because we do not believe that we can do so with sufficient reliability.

**Senator CONROY**—So which macro-economic figures are you saying you did not supply to the government?

**Mr Smith**—For example, we have not estimated precise impacts on employment and those types of variables. There are a variety of assumptions in our modelling, but in the package—and I have drawn attention to all of these in the submission that we have given to

you—Treasury and the government have made a number of qualitative statements about the macro-economic impact of the tax package. They are all listed in the submission as well as in ANTS.

**Senator CONROY**—So you have never supplied the government with an estimate of employment growth?

**Mr Smith**—We have not sought to provide specific point estimates of the tax package on those sorts of figures.

**Senator CONROY**—What about employment or GDP growth?

**Mr Smith**—Not even GDP growth, other than there is an explicit growth dividend assumption, as you know, in the package for three years.

**Senator CONROY**—How did you come up with a growth dividend figure when you could not come up with growth?

**Mr Smith**—We have come up with what we regard as a highly conservative estimate based on these indicative figures, and that has been done for only one purpose—that is, for providing as accurately as we can, although we think it is perhaps potentially conservative, an estimate of the revenues that are generated by the package. We have taken that out only for the forward estimates period, so we have provided that estimate only for that period.

**Senator CONROY**—Is that a Treasury projection or a Treasury estimate?

**Mr Smith**—It is essentially an assumption. We regard it as a conservative assumption.

**Senator CONROY**—So it was not modelled out of anything?

**Mr Smith**—It is not out of a model, no.

**Senator CONROY**—I am just trying to clarify which macro-economic indicators you have not supplied to the government—employment, GDP—

**Mr Smith**—There are no point estimates of those things. We have said that we expect certain qualitative results from those things. Do you want me to list all of those dot points again?

**Senator CONROY**—I am looking for the ones for which you have not specifically provided a point figure.

**Mr Smith**—The point figures we have, of course, are the revenue figures, the price figures and the GDP figure that I have just referred to.

**Senator CONROY**—Which was an assumption rather than a model?

**Mr Smith**—It is an assumption. It is not a modelled outcome, which is the point Dr Henry is making—that is, we have had regard to models informing these qualitative judgments.

**Senator CONROY**—You indicated you commissioned Murphy. Was there any Treasury commissioned work other than Murphy?

**Dr Henry**—Not that I can recall, no. Not on this issue.

**Senator CONROY**—On the tax package?

**Dr Henry**—Not on modelling the macro-economic implications of the tax package, which I understood to be your question, no.

**Senator CONROY**—Could you take us through how you came up with the inflation estimate of 1.9 per cent? How was it derived?

**Dr Henry**—As I indicated earlier, one of the outputs of a PRISM simulation is estimates of the changes in prices of a whole range of commodities. It is a bit more complex than that. We take the outputs of 107 industries and look at what happens to the prices that would be paid for those outputs of 107 industries by final consumers. We then use those 107 price changes, together with other outputs of the model—that is, changes in the costs of other variables in the model which do not appear in private final consumption expenditure—and we map those changes to components of the consumer price index at the 108 level, the most highly disaggregated level of the consumer price index, so that we have percentage changes in prices for each of the 108 expenditure subgroups which appear in the consumer price index. After they are multiplied by the CPI weights, you add them up and you get 1.9 per cent for this particular package.

You should note that there are some qualifications on that. The 1.9 per cent, as is indicated in the document, is really our estimate of the second year impact of the package—or, more correctly, it relates to the package as it would be implemented by year 2. This package is implemented over a number of years. Some things happen on 1 July 2000—indeed, some things happen before that—and some things do not happen until the second or third year. The 1.9 per cent relates to the package as it would be implemented in the second year.

**Senator CONROY**—What would be the figure for the first year?

**Dr Henry**—I think we have indicated in the document that the figure for the first year would be a little higher—perhaps as much as half a percentage point higher—and that is because not all of the 10 indirect taxes that are being removed are being removed from 1 July 2000. Those in particular are some of the state taxes as set out in the document.

**Senator CONROY**—When are they being removed?

**Dr Henry**—Off the top of my head, some are being removed from 1 January 2001 and some from 1 July 2000. That is the accommodation tax that applies in New South Wales and

I think also in the Northern Territory. Financial institutions duty will be removed from 1 January 2001. The debits tax will be removed from 1 January 2001. Then stamp duties on a range of items—marketable securities, business conveyances, leases, mortgages, debentures, bonds and other loan securities, credit arrangements and so on—will be removed from 1 July 2001.

**Senator CONROY**—You have been able to be fairly precise about your second year figure.

**Dr Henry**—Yes.

**Senator CONROY**—You cannot be more precise than around half a per cent?

**Mr Smith**—I can be, Senator: 2.5 per cent.

**Senator CONROY**—That is a full per cent higher, not half a per cent higher.

**Mr Smith**—No, the figure is 2.5 per cent rather than 1.9 per cent.

**Senator CONROY**—Got you.

**CHAIR**—That is the first year?

**Mr Smith**—Yes. On the same basis as the 1.9 per cent, it is 2.5 per cent in the first year.

**Dr Henry**—I think the third year impact is 1.8 per cent or thereabouts. We could get you a precise number on that as well.

**Senator CONROY**—The Treasurer is on the record as saying that the government has modelled the tax package and that it will be good for jobs and growth. I think he answered a question at the Press Club about modelling. Are you familiar with that answer? It was during the election campaign. At the National Press Club on 14 August he said, 'Look, we've done a lot of modelling.' Was that on a catwalk?

**Dr Henry**—I am not sure I understand the question, Senator.

**Senator CONROY**—You are saying you have basically commissioned one model and the Treasurer is saying, 'We've done a lot of modelling.'

**Dr Henry**—I am not sure what sort of answer you are expecting, Senator. I am not sure how I can help you.

**Senator CONROY**—Are you aware of any modelling that the Treasurer has done other than the one model that you had done at a macro level?

**Dr Henry**—Are we talking about the modelling of the macro-economic implications of the package?

**Senator CONROY**—Yes.

**Dr Henry**—I have indicated that we had some modelling done by Chris Murphy of the macro-economic implications of a package which contained some of the elements of the government's package. That was quite an extensive and very considerable piece of work, I think you would agree. In that sense, a lot of modelling has been done.

**Mr Smith**—We also had regard to a lot of other modelling, but not modelling that we paid for. We referred to two of those documents in the ANTS package.

**Senator CONROY**—Why didn't you refer to the Murphy model in the package?

**Mr Smith**—One of the two that is in the ANTS document is in fact based on the Murphy model.

**Senator CONROY**—It is based on the Murphy model, but it is not the Murphy model. It is not the one that you have presented to us?

**Mr Smith**—No, we got a separate one, but they are almost the same results.

**Senator CONROY**—So when the Treasurer says, 'Look, we've done a lot of modelling,' he is not referring to any extensive amount of modelling done by Treasury. You have referred to modelling that is out there in the public domain. You have commissioned just the one and the Treasurer has said, 'Look, we've done a lot of modelling.' You cannot enlighten the committee at all? You are not aware of any modelling that the Treasurer's office has done?

**Dr Henry**—I cannot add to the information I have already provided.

**Senator CONROY**—One of the assumptions set out on page 2 of the section of the Murphy model attachment which interests me is the section on the assumptions concerning the black economy. The document states:

... optimistically that where VAT applies it covers all expenditures recorded in the national accounts ...

So this assumes no evasion of the GST. Clearly, this is a ridiculous assumption which must put in doubt some of the revenue estimates from the GST.

**Mr Smith**—Senator, the assumptions for the black economy and the level of evasion of the GST that we used in our estimates are set out in the ANTS document and they are not the assumptions that you have just referred to.

**Senator CONROY**—Could you take us through them then?

**Mr Smith**—The assumption in the ANTS document is 95 per cent compliance. I think the figure given is based on an estimate of the so-called black economy of \$18 billion.

**CHAIR**—Was that \$18 billion?

**Senator CONROY**—Yes, \$18 billion. The tax commissioner has talked about \$15 billion.

**Mr Smith**—These figures are set out in the ANTS document. I do not know what the context of \$15 billion is, but we have actually used \$18 billion.

**Senator CONROY**—Can you take us through the methodology used in arriving at that?

**Mr Smith**—It is essentially based on the estimates that came from the tax office.

**Mr Simpson**—The \$15 billion you referred to that the commissioner mentioned is a figure I think he gave in a speech. He was referring to some figures others had indicated as being the potential level. I do not know where \$18 billion came from. We certainly provided information to Treasury for the purpose of the modelling, but I do not have those details with me.

**Dr Henry**—Perhaps I could help you, Senator. My memory is—

**Senator CONROY**—Improving?

**Dr Henry**—No, that was what I was about to confess. But I do remember that I answered this question in some detail before the Senate Economics Legislation Committee—

**Senator CONROY**—We would probably disagree. I remember Senator Cook asking a number of questions about this. I do not know that we would agree that we got an answer.

**Dr Henry**—Let me put it this way then, Senator: I answered it much more comprehensively than I or anybody else at this table would be capable of answering it today.

**Mr Smith**—The figures I am referring to are on page 30 of the ANTS document.

**Senator CONROY**—If I remember the discussion, at the time you were not prepared to put a figure on it. I am trying to get from you some indication of where you got the \$18 billion.

**Mr Smith**—It is in the ANTS document, Senator.

**Senator CONROY**—Do you want to read it to us?

**Mr Smith**—It says quite explicitly ‘from the ATO’.

**Senator CONROY**—They have just said they are unaware.

**Mr Smith**—Mr Simpson may well be unaware, but that is where the figure came from. It says so in the ANTS document.

**Senator CONROY**—Mr Simpson is just getting some advice.

**Mr Smith**—Yes, Mr Simpson is probably like me; he does not actually know everything.

**Senator CONROY**—No, I understand that.

**Mr Smith**—We do our best.

**Mr Simpson**—I think the position was that we had given an estimate of \$16 billion, indicating for example that it would still be at the bottom end of the estimate. Of course then it had to be grown for the year in question.

**Senator CONROY**—I had one question I was interested in pursuing, which has to do with that. I am looking at a minute from Mr B. Cassidy, an FAS, dated 12 December 1991. This was tabled by the Treasurer, so it is a publicly available document. In that document he makes the point, ‘Any estimate of additional GST revenue from the black economy must be purely speculative.’ Would you agree with that comment?

**Mr Smith**—I am not familiar with that document. I think it is at least an arguable statement that, by definition, we do not know precisely the size of the black economy. I do not think anyone claims that.

**Senator CONROY**—It is a Treasury minute. Are you familiar with that, Dr Henry?

**Dr Henry**—No. I would not comment on it without seeing it and having an opportunity to reflect on it.

**Senator CONROY**—It is a publicly available document. It was tabled in the parliament, I think by Mr Dawkins. I would like to table that. Dr Henry could have a look at it and maybe reflect on it.

**CHAIR**—We will accept that as a tendered document.

**Mr Simpson**—I am informed that in 1991 the then Treasurer, Mr Willis, issued a press release in relation to Fightback, arguing as false there would be no avoidance of a GST. He then quoted the GST non-compliance at five per cent.

**Dr Henry**—And that same number has been used in this package.

**Senator CONROY**—In your estimates, you are on the 95 per cent figure?

**Dr Henry**—Correct.

**CHAIR**—We are getting to the black economy, but before we leave the modelling part there are a few questions about modelling that I had and I thought that maybe we should deal with them as a discrete block. I understood you to say that you do not believe that there is any economic model in existence which can model the macro-economic impact of the tax package. That is right, isn't it?

**Dr Henry**—That is correct. I should hasten to say that I am not wanting to be critical of any of the models which exist out there. It is simply the case that this is a rather comprehensive package. It is a very substantial challenge to be able to model this package in all of its detail and I am of the view that none of the existing macro models, including the dynamic computable general equilibrium models, are configured in such a way that they could adequately do justice to the package. That is really what I am saying, but I am not trying to be critical of those models.

**CHAIR**—No, I understood that. Our terms of reference require us to look at the assumptions, because no-one can say effectively what the impact on GDP or growth of the economy will be or how many jobs will be created or lost by virtue of the introduction of the tax package. No-one can give us any figures on those things from a model.

**Dr Henry**—Let me respond to that question in this way: if what you are after is a point estimate for GDP and for employment growth, those models will produce those things because they are configured to produce such things. But I am suggesting that there would be considerable uncertainty attached to those numbers: that is, at best I would regard those numbers as providing an order of magnitude.

The other point I would make is that, despite the limitations of those models, Treasury feels very confident making qualitative statements about the macro-economic impact of the package. We have some difficulty with precise point estimates, for the reason I have mentioned, but we have less difficulty with making qualitative statements. Indeed, one hardly needs a quantitative model to make some qualitative statements about the likely macro-economic impact of the package. A conceptual or theoretical model would be adequate.

**CHAIR**—So you do have modelling outcomes on economic growth and unemployment, to take two macro indicators, from your modelling work. You do have those as point estimates, but you discount them for the various reasons that you have explained. Is that right?

**Dr Henry**—The Murphy model simulation produces point estimates. All models produce point estimates. But, in evaluating what reliance can be placed on those point estimates which come out of any modelling exercise, one has to take into account a whole range of factors, including the ability of the model to deal precisely with the particular package that is being modelled. One would also have to take into account one's confidence in the underlying assumptions of the model, the quality of the database and all those sorts of things. In particular, one would have to qualify the point estimate output of the model according to the extent to which the simulation accurately reflected the particular policy proposal.

**CHAIR**—Are the point estimates that come from these models or from your model published anywhere? Are they on the public record?

**Dr Henry**—We have made the results of the Murphy simulation available to the committee.

**CHAIR**—They are the ones you are referring to?

**Dr Henry**—That is correct. All of the PRISMOD estimates are point estimates, but the methodology which lies behind PRISMOD is of a sort which does not permit inferences to be drawn about macro-economic impacts. It is a different sort of model. It is configured in a particular way in order to address a particular class of questions. That configuration does not permit the model being used to answer questions about the macro-economic impact of the package, other than the impact on the CPI, the costs of producing exports, the cost of investment and things like that. It is very good on price detail and even on price aggregates because it is, after all, a price model; but it is unable, as it is configured, to provide projections about real variables and things like real gross domestic product, employment and so on.

**CHAIR**—So, in your submission, point estimates are not able to be made from the modelling. As a consequence, you have made a range of other assumptions to arrive at broad indications or trends as to what growth of the economy and jobs will be. That is your point.

**Dr Henry**—I think that is paraphrasing it.

**CHAIR**—Indeed.

**Dr Henry**—Obviously it is paraphrasing it. We were interested in the qualitative picture primarily: that is, is it likely that this particular package will lead to a higher level of gross domestic product over time than what we would otherwise have? Is it likely that this package would lead to higher employment levels over time than what we would otherwise have? Those are qualitative questions, and for those questions we were comfortable with developing a qualitative answer.

Our secondary interest was in the question of what might be the impact on revenue of these sorts of behavioural effects: that is, if we are comfortable with the idea that gross domestic product will be higher, what might be the impact on income tax revenue and on GST revenue of that higher level of gross domestic product? So we looked at a number of model simulations that had been conducted, certainly quite unrelated to Treasury, and we engaged Murphy to conduct a particular simulation of a particular package that I have indicated previously. On the basis of those studies, we felt very comfortable with the notion that the judgment we were making about the higher amount of revenue that you would get—the so-called growth dividend—was a very conservative judgment.

**CHAIR**—You talk about making a judgment based on the material that the Murphy model has thrown up. What I am interested to know is: how do you make that judgment? Does someone come to, in their mind, a best informed guess, or is there more science to it than that? How do you actually make the judgment? What is the basis for the judgment? Can you give us an insight into how you arrived at these figures?

**Dr Henry**—A ‘best informed guess’ is not a wholly inapplicable description, but I would emphasise the ‘best informed’ bit. There is obviously a certain amount of judgment involved.

**CHAIR**—What is the difference between a judgment and a guess?

**Dr Henry**—Precisely; I think that is the point I am making. I am going to elaborate on that. The alternative is to take the point estimates from the model as given—to accept them at face value. That, in itself, requires a judgment that the modelling output is reliable. That is not much better than a guess either.

**CHAIR**—Who makes it?

**Dr Henry**—In this particular case, I take responsibility for it.

**CHAIR**—You are the judge or estimator or guesser?

**Dr Henry**—Like most things, no one individual could claim that this is solely their own work. What I was saying was that I take responsibility for it. There was considerable discussion within the Treasury about these things. We reviewed the modelling work that had been done and the sorts of estimates that people were producing for increases in gross domestic product. We reviewed all of that quite closely. We then had a discussion about what might be the most plausible range of estimates, and then we fixed on a number very much at the conservative end of that plausible range of estimates. At the end of the day, I assumed responsibility for that number.

**CHAIR**—So we really have to take on trust that you have applied your best professional judgment here.

**Dr Henry**—You will find that that applies to everybody you are going to speak to over the next two days. I am afraid there is no alternative.

**CHAIR**—At the end of all this process, it is founded on an ability by eminent economists within Treasury to make a judgment.

**Dr Henry**—Yes—or, if you prefer to look elsewhere, eminent economists elsewhere. At the end of the day, you are going to have to trust their judgment on these issues. The question is whether you trust our judgment or whether you trust the judgment of somebody else, but at the end of the day you are going to have to rely on somebody's judgment.

**Mr Smith**—Judgment informed by economic theory and by the model.

**CHAIR**—But not produced by the modelling.

**Mr Smith**—Not produced or presented as point estimates as a result of modelling.

**CHAIR**—When you came to this judgment, estimate or guess, did you have regard to what happened or what the track record was when GSTs or VATs were introduced in other countries? Did you look at international experience?

**Dr Henry**—Yes, we did, Senator. I would not be able to go through that in detail with you. I do not recall all of the details, but we certainly did look at all the experience in other countries. It is rather difficult to interpret, frankly. In some countries, GSTs were introduced in the middle of a recession.

**CHAIR**—In some cases a GST was introduced and led to a recession.

**Dr Henry**—I do not recall being aware of any such case.

**CHAIR**—Our major trading partner, Japan.

**Dr Henry**—Frankly, I think it is a bit rich to suggest that the introduction of a GST in Japan is what led to a prolonged recession.

**CHAIR**—There is an active debate in Japan now—is there not?—that it ought to repeal in its entirety or in large part its GST in order to bring about an economic recovery because, as the argument goes, the increase in the GST precipitated the recession which Japan is now deeply in the grip of.

**Dr Henry**—I have heard that argument, Senator, and I guess what I am saying is that I would not place much value in that particular argument myself. I think a more sober analysis of the economic problems confronting Japan suggests that there are much more substantial factors at play than the structure of their tax system.

**CHAIR**—I do not query that argument. I think if we had a long dialogue—which we will not have—we would probably agree about the structural problems in the Japanese economy. But what triggered the downturn, it is argued by respectable economic opinion, was the hike in their—I forget what they actually call it—goods and services tax.

**Dr Henry**—As I have indicated—

**CHAIR**—You are indicating to us, though, that you discount that.

**Dr Henry**—Quite so.

**CHAIR**—If we had an insight into how you formed a judgment, which is what we need to have in order to conclude, would we have to evaluate your judgment as excluding the Japanese experience?

**Dr Henry**—No, not at all, Senator. You would have to evaluate it as not accepting the proposition that the introduction of a GST in Japan contributed—certainly not produced—the recession in Japan. We are not excluding the Japanese experience; it is just that our interpretation of the Japanese experience is different from the one that you have indicated.

**CHAIR**—If there were a considerable body of Japanese economic opinion that it did have an impact and that its removal would lead, among other things, to bringing the Japanese economy back into the black, would you review your assessment?

**Dr Henry**—We obviously review our assessment of the impact of policy change whenever new information comes to light, but I find it very difficult to believe that our assessment on this issue would change. We review our position with frequency, but I would not expect our view on this issue to change.

**CHAIR**—You have made this judgment. This is a weighty judgment. You are obviously in a position to defend it, but it is interesting to know that, if we heard a substantial body of respectable Japanese economic opinion which challenged the assumption that you have made, you would be prepared to go back and re-examine what you have said.

**Dr Henry**—I think I have answered that question, Senator.

**CHAIR**—Which I took to be yes.

**Dr Henry**—Of course.

**CHAIR**—That is all I am looking for. It is nothing more sophisticated than that, Dr Henry.

**Senator SHERRY**—I have one point, Dr Henry. The introduction of a GST in Japan at a relatively modest level of three per cent, then an increase to five per cent I think at Easter last year, has not done anything to help the Japanese economy.

**Dr Henry**—Perhaps I could deal with that in this way. I think the problems in Japan are of such enormity that even had it helped the Japanese economy you would not have been able to observe the impact. I am not suggesting that it would have helped the Japanese economy, given the problems which are present there. But even if it did, it would be so small relative to what is needed in Japan that you would not be able to observe the impact, I suspect.

**Senator SHERRY**—To your knowledge, can you identify any positive contribution the introduction and subsequent increase of a GST in Japan made to the Japanese economy?

**Dr Henry**—I really doubt that we would be able to pick up an impact, either positive or negative, from the Japanese experience, given the circumstances that have confronted Japan. The swings that one has observed in Japanese macro-economic performance have been so large that they would completely swamp any change to the tax system in Japan.

**Senator SHERRY**—Dr Henry, earlier Senator Conroy went through a list of four issues relating to modelling and its transparency: (a) that it should be published, and you referred to that in your answer; (b) the limitations of the modelling should be explicitly stated; (c) the degree of margin of error; and (d) the assumptions on which the inputs to the model are derived. What is the degree of margin of error in the PRISMOD model?

**Dr Henry**—How do you evaluate those things?

**Senator SHERRY**—I should say that Professor Ken Wallis, who is regarded as a leading expert on modelling, did advise us at an earlier meeting that this was one of the key issues that should be identified in any modelling exercise.

**Dr Henry**—Yes. I am accepting that. I am accepting not just that he said it but I am also accepting the point that he made. In relation to PRISMOD I would answer the question as follows: the PRISMOD data set is the entire national accounts and input-output data set

produced by the Australian Bureau of Statistics, that is at its most highly disaggregated level of detail, and then some—that is, there is quite a lot more raw data in PRISMOD than is available from the Australian Bureau of Statistics in its most highly disaggregated input-output system. The typical national accounts publications are a very small subset of the input-output system.

PRISMOD takes all of that data as given. All of that data is estimated. There is no such thing as ‘data’ in the strict sense of the word. Everything that the ABS publishes is an estimate. Attaching to each of those estimates there are, if you like, confidence intervals—that is, you can make judgments about what reliance you can place on each of those numbers. We have millions of those numbers in PRISMOD. That constitutes the raw data set. PRISMOD then manipulates the numbers in, conceptually, a very straightforward manner. I would not be able to explain it to you here, certainly not without a whiteboard and a few hours. Conceptually, it is a fairly rudimentary sort of manipulation. It then produces a completely new data set at the same level of detail.

So you have two sets of numbers. You have a very comprehensive data set, which comes from the Australian Bureau of Statistics. We add some data to it that the ABS does not have. Then you have a completely new data set, which has just been subject to very rudimentary technical changes—just multiplication, addition, division and subtraction. They are basic arithmetic operations—that is, there is no more estimation involved. Then you have the new data set. You have to make judgments about the reliance that you can place in the old data set and then about the methodology itself—that is, do these arithmetic operations make sense? Once you have made those judgments you can then decide what sort of reliance you are going to place on the new data set.

Typically what we do then is compare the new data set with the old data set and we say, ‘Ah, the price of tobacco products has gone up by eight per cent.’ PRISMOD is not a macro-econometric model of the sort that Professor Wallis deals with routinely. It does not estimate coefficients on equations from a data set. In a sense it does but not in the way that econometricians estimate equations in a model. The technology in PRISMOD consists of no more than matrix multiplication, division, addition and subtraction techniques.

**Senator SHERRY**—Are you saying there is no margin of error?

**Dr Henry**—No.

**Senator SHERRY**—Can you give us an estimate of what the margin of error is?

**Dr Henry**—What I am saying is that it is rather more complex than that. You would have to look at the margin of error applying to every one of the numbers that goes into PRISMOD that constitutes its data set. That is what you would have to do. This is not like a macro-econometric model that might have a dozen equations, and I can tell you the standard errors applying to each of the coefficients or whatever. This model has hundreds of thousands of equations, if you like—if you want to break it down to that level—with more than a million numbers and each of those numbers has some uncertainty attaching to it because each of those numbers, even though we think of them and accept them as data, is in fact an estimate.

**Senator SHERRY**—So there is a margin of error, but you cannot quantify it.

**Dr Henry**—That is correct.

**CHAIR**—I understood you to say that the 1.9 per cent that has been booted around in public debate as the inflationary impact of the tax package is the second year modelled outcome and that for the first year the tax package would produce an inflationary level of 2.5 per cent. Is that a correct understanding?

**Dr Henry**—That is correct.

**CHAIR**—When you modelled the 1.9 per cent, did you take into account any wage reaction—wage earners trying to make good their salaries in order to compensate for 2.5 per cent—or did you not?

**Dr Henry**—No, we did not. Our assumption—and it is an assumption—is that the compensation package (that is, the income tax cuts, the changes in social security payments and the changes in family benefits) would be adequate to satisfy participants in the labour market—there was no need for an increase in pre-tax wages.

**CHAIR**—A 2.5 per cent inflation rate, in view of the compensatory factors, would not generate any wage claims.

**Dr Henry**—That is correct.

**CHAIR**—When do the compensatory factors apply?

**Dr Henry**—In the main, from 1 July 2000.

**CHAIR**—For the sake of this record, when is the first year?

**Dr Henry**—The year 2000-2001.

**CHAIR**—Do you regard that from calendar 2000?

**Dr Henry**—No, from 1 July 2000. The fiscal year 2000-2001.

**CHAIR**—My reading of the public debate is that the compensation is related to a figure of 1.9 per cent, not a figure of 2.5 per cent.

**Dr Henry**—Perhaps I could clarify. That impression might come from a reading of the simulations that are produced in the document showing for different household types what would be the impact on them in terms of net dollars per week gain or loss. The CPI figure, which has been used for all of those tables, is 1.9 per cent. That is the second year figure. That is made quite explicit in the document. But it would be wrong to conclude that the compensation package was based on the 1.9 per cent; rather, once one takes into account the compensation package and then discounts for the effect of a 1.9 per cent CPI, one finds the results that are produced in the document.

If the CPI effect in the first year is in fact 2.5 per cent, one can quite easily—and it is just a trivial arithmetic exercise—adjust the numbers in the document to see what difference that would make. You could do that if you wanted to. I do not know of how much interest it is, quite frankly. This is a multi-year package, which can really only be assessed in its entirety in year 4. So there will be short run effects going in all sorts of directions, but once it settles down one can make an assessment of the package.

**CHAIR**—Did you model at all the wage effects of these inflation figures you have? Did you conduct any modelling or do you have any material to which you directed your attention to show what the wage flow-on impact will be if this inflation figure pops up? Did you do that at all?

**Dr Henry**—No. As I indicated, it is an assumption of our modelling that nominal pre-tax wages will not change, that the compensation will be considered to be adequate.

**CHAIR**—Can you comprehend then a real life example of wage earners thinking and believing that the impact will be 1.9 per cent now hearing that the impact in the first year will be 2.5 per cent and saying to themselves, ‘We had better compensate by claiming a wage increase’? Can you understand that reaction?

**Dr Henry**—No, I cannot.

**CHAIR**—I am interested in the explanation.

**Dr Henry**—I would expect that wage earners would be interested in a little more than a comparison between figures of 1.9 per cent and 2.5 per cent. The question is, surely, whether wage earners are satisfied that the compensation they are going to get is large enough no matter what the CPI effect turns out to be. That is surely the question. So the assumption we made is that they will feel so satisfied that they will believe the compensation package is sufficiently generous, the income tax cuts are sufficiently large, the increases in social security payments are sufficiently large, that they will be compensated for the CPI effect, whatever it turns out to be. We have indicated to you what our estimates of the CPI effect would be in years 1 and 2, and, as I indicated earlier, in year 3 it would be somewhat lower than 1.9 per cent.

**Senator SHERRY**—Lower than 1.8 per cent?

**Dr Henry**—I was prepared to give a more precise figure than that. That is my memory.

**Senator O’CHEE**—Dr Henry, you said that it was difficult to model macro-economic effects accurately. That is, I understand, because of the complexity of an economy and capturing an economy in a set of equations. Is that the case?

**Dr Henry**—That is correct.

**Senator O’CHEE**—So when Mr Wallis says, ‘You should do this, and you can model these things with a macro-economic model,’ he should really say that you describe certain

tendencies with a macro-economic model because the economy is much more complex than a series of equations?

**Dr Henry**—Yes, I would agree with that. I suspect he would also. I suspect there would not be an economist around who would not accept that proposition.

**Senator O'CHEE**—To your knowledge, is there anybody in the world of economics who believes that you can get a 100 per cent accurate estimate of changes in a whole economy by using a model?

**Dr Henry**—To my knowledge, no economist, no.

**Senator O'CHEE**—Because if that were the case, we would take all the uncertainty out of economics and business, wouldn't we?

**Dr Henry**—Quite so. Those of us who could do it would be very rich people.

**Senator FERGUSON**—Or out of a job.

**Dr Henry**—Yes, or out of a job.

**Senator O'CHEE**—So really a model is a tool that helps you arrive at conclusions, but it is not the conclusion itself. Is that the case?

**Dr Henry**—Quite so. In fact, I would add to that. Even those most avid practitioners of modelling, at the end of the day, regard the output of the model as providing no better than qualitative information. Very few modellers would feel happy modelling a package as comprehensive as the government's package and taking the results as being gospel and placing reliance on the numbers. I suspect all of them would rather say, 'Well, this provides an order of magnitude—some guidance on the direction of change and perhaps on the strength of change.'

**Senator O'CHEE**—So when you and your colleagues in Treasury sat down to look at possible impacts on GDP growth and the range of GDP growth, you reviewed various models that had been thrown up and you used them in exactly that fashion—that is, as a tool on which you could frame an ultimate conclusion.

**Dr Henry**—That is correct.

**Senator O'CHEE**—That would be consistent with good intellectual practice in terms of economics.

**Dr Henry**—That is correct.

**Senator O'CHEE**—You said there was also considerable discussion. What did you discuss within Treasury when you were looking at what the level of GDP growth would be?

**Dr Henry**—We were looking at the sorts of results which came out of different models, considering the different structures of those different models, considering the precise questions that the modellers were trying to answer and then drawing judgments about a plausible range of estimates. For example, we were trying to get some idea of a plausible range of estimates of the impact on gross domestic product over a run of years. After having got what we thought was a plausible range of estimates, we then selected a number which we felt comfortable using for the purposes of our revenue projections, and no more than that. We were also interested in the range of numbers for backing our conceptual work on the likely qualitative impacts of the package on things like gross domestic product and so on.

**Senator O'CHEE**—So when you review a model, you really are looking at the assumptions in a model, aren't you? Because the model is not actually a description; a model is really a set of assumptions about an economy.

**Dr Henry**—Indeed, I think that is in fact a tautology, Senator—that a model is a simplification of reality.

**Senator O'CHEE**—But it is not reality itself.

**Dr Henry**—Quite correct.

**Senator O'CHEE**—So you had a range of figures for GDP growth.

**Dr Henry**—That is right.

**Senator O'CHEE**—What was that range of figures?

**Dr Henry**—I do not recall the precise range, but most of the figures made at least a two percentage point contribution to GDP. Some were much higher than that and some were closer to four per cent, depending upon the period of time that one was looking at. So it was a range of about two per cent to four per cent—maybe a bit less than four per cent actually. Four per cent really would have been at the high end of the range, but I would have thought that that sort of range was not implausible.

**Senator O'CHEE**—I just want to get this correct. You had a range of figures that all indicated a positive contribution to GDP growth?

**Dr Henry**—That is correct.

**Senator O'CHEE**—You did not have any figures that indicated a negative contribution to GDP growth?

**Dr Henry**—That is correct.

**Senator O'CHEE**—So every available model that you looked at basically said that this tax package would actually contribute to the growth of the economy?

**Dr Henry**—Yes. Remember that none of the modelling at the time was looking at the government's precise package; I have already indicated that. That is rather difficult to do. But they were simulating packages of this sort—that is, removal of the wholesale sales tax, the introduction of a broad based tax on consumption and so on. It was in more detail than that obviously, but packages of that sort were being simulated.

**Senator O'CHEE**—If a package of this sort improves the economy in terms of contributing in a positive sense to growth, then it also must follow that the existing tax system is an impediment to the economy achieving its full potential. By abolishing the existing tax system and replacing it with something like this, you actually free up the economy.

**Dr Henry**—Yes, that does follow.

**Senator O'CHEE**—About two years ago there were changes to the wholesale sales tax that increased the rate of wholesale sales tax across the board. Did the previous government subject them to this degree of rigorous analysis?

**Dr Henry**—I do not recall all the details of that, Senator. In fact, I was not in the country when those changes were being made. I believe that those changes were not subjected to comprehensive distributional analysis. However, I should say that that could well have reflected a judgment in the Treasury in that the methodology which hitherto had been used for estimating the distributional implications of indirect tax changes was deeply flawed. I do not really want to make a judgment about those facts as I understand them, but I think it is the case that modelling of the level of detail that you find in here was not, for whatever reason, made of the 1993-94 package.

**Senator O'CHEE**—Mr Smith, you were—

**Mr Smith**—I was in the country, Senator. If you are referring to the 1993 indirect tax changes in the budget of the 1993-94 financial year, a distributional analysis was not done of that package. It was not done because we did not believe that the distributional modelling we had at the time, which was HES based, was going to produce useful results.

**Senator O'CHEE**—Although, at that time, in 1992, the government had used some distributional modelling of the then opposition's tax proposals. They did not use that same modelling on their own changes to the indirect tax base?

**Mr Smith**—That is correct.

**Dr Henry**—I think I can perhaps explain why, since I have obviously been quite involved. In the modelling of the Fightback package, the department was asked to accept the Fightback methodology and to essentially check the accuracy of the computations—at least that is as I understood the instruction, and I was responsible at the time in the department. We had made it known previously on the public record, and we did in advice to the government at the time, that we had severe reservations about the methodology. In particular we had substantial problems with the use of the household expenditure survey for conducting an assessment of the distributional implications of the package. Our concerns dated back to

the work we did in 1985. At that time, we also made our views known about the severe reservations that we had with using the household expenditure survey for those purposes.

In 1993-94 the situation was somewhat different. We were not asked to adopt any particular methodology and to check the computational accuracy of the people who had adopted that methodology. Rather, we were asked what our view would be on doing this sort of work. In that unconstrained world, the department would say, as it did, 'Look, we don't accept that the household expenditure survey should be used for these purposes. We just don't accept that it's up to the game, frankly.' That is the position which we put again to the present government and which is reflected in the government's document—that is, that one should not use the household expenditure survey for this purpose.

**Senator FERGUSON**—When was it used? Did you say 1985?

**Dr Henry**—In 1985 we again made a use of the household expenditure survey. I was involved then as well. This thing has followed me around.

**Senator SHERRY**—Third time lucky.

**Senator FERGUSON**—We hope.

**Dr Henry**—In 1985 we made use of the household expenditure survey, but it was very heavily qualified use. In fact, the truth is that we constructed a sort of synthetic data set that was a mix of household expenditure survey numbers and the consumer price index. It was a mix of the two things. But then in 1991-92 we were accepting somebody else's methodology and just checking the accuracy of the calculations. On this occasion, we have moved completely to the CPI approach—that is, we do not have a mix of the household expenditure survey and the CPI approach.

Our views on the usefulness of the household expenditure survey for this type of work have indeed hardened over the period, but they have not fundamentally altered. We have been on the public record since 1985 cautioning against the use of the household expenditure survey for this type of work. Not only have we been on the public record but so too has the ABS. Indeed, with every publication of the household expenditure survey, the ABS makes a caution which, frankly, would invalidate most uses of the household expenditure survey for distributional work.

**Senator O'CHEE**—So you believe your modelling now in this respect is more accurate than it was in 1985, or more reliable shall we say?

**Dr Henry**—More reliable, yes. It is certainly less prone to misinterpretation. I think it is more easily understood, much more easy to explain and more reliable.

**Senator O'CHEE**—Finally, I want to ask you some questions about impacts on people's incomes. You said that you believed that the compensation measures contained in the package were adequate to compensate households for any foreseeable change in the prices of goods. You said that it did not matter whether you were talking about a 1.9 per cent or a 2.5

per cent increase in CPI. You said that the compensation was adequate because people really looked at their disposable income rather than at their pre-tax income. Is that the case?

**Dr Henry**—Yes, correct.

**Senator O'CHEE**—So it would be an irrational decision to urge a wage increase given that the after tax income that people have is more than adequate to allow them to purchase the items they purchase at the moment after the tax changes.

**Dr Henry**—That is correct.

**Senator O'CHEE**—Given that, would it be irresponsible to urge wage increases?

**Dr Henry**—It is not for me to comment on that one.

**Senator O'CHEE**—Okay. Thank you.

**Senator FERGUSON**—I want to confirm one of the questions that Senator O'Chee has asked in various guises. Was the Treasury's approach to preparing the tax package consistent with the approach that you took in 1993 when you were analysing the then opposition's Fightback package?

**Dr Henry**—I think I have already addressed that. The way in which we computed price changes and revenue effects was identical.

**Senator FERGUSON**—Identical?

**Dr Henry**—That part of it was identical—price changes for different commodities and revenue changes. But the way in which we calculated the distributional effects was different. For example, there is the impact on a household of a particular type, earning a particular level of income, with its principal source of income being wages and salaries, with two children and so on. The way that we calculate the impact on the cost of their consumption bundle—whatever it is that they consume—as a result of tax reform is different.

It is different for the reason that I have already mentioned—that, in 1991-92, the Fightback package had used the household expenditure survey data and had used that methodology. We were asked to accept the methodology, not to challenge it. Accept the methodology and what do you get? So we used the same methodology. We did go on the record as saying that we had severe reservations about the methodology; nevertheless, we used it.

On this occasion, we were not asked to accept somebody else's methodology. Rather, the government said to us, 'What are the available methodologies? Show us the results that you would get from a HES based analysis and show us the results that you would get from a CPI based analysis. Which does the Treasury believe provides the better, more reliable assessment?' Our answer was the CPI based analysis. But our reservations about the HES based analysis are so strong that we would not recommend the HES based analysis being

used. Frankly, we think the numbers are unreliable. We do not think the numbers are unbelievable or implausible as such; it is just that the numbers are unreliable.

**Senator FERGUSON**—So it is fair for us to assume then that you have adopted a consistent approach with respect to using income itself as the basis for modelling compensation?

**Dr Henry**—Yes. I think our approach has been consistent throughout. You might be asking what we believe is the better index of change in welfare, if you like, of different types of households—whether one should look at the change in their real disposable income or at some other measure of welfare change. On that we have typically looked at a number of different measures, but our preferred measure has always been change in real disposable income. It has always been our preferred measure.

**CHAIR**—Out of respect for the witnesses, who have been at the table for almost two hours, I was going to have a short break of 10 minutes and then start the questioning with Senator Murray, if that is fine by the committee.

**Senator HARRADINE**—We are off modelling?

**CHAIR**—No, we are not off modelling. We started on modelling, and it seems to me that modelling is quite an important part of our reference. Rather than going on to anything else, we might exhaust those questions around the table and then move to the next area—which Senator Conroy seems to have been getting into—on a black economy.

**Proceedings suspended from 10.50 a.m. to 11.03 a.m.**

**Senator MURRAY**—Dr Henry, who has executive responsibility for PRISMOD?

**Dr Henry**—Currently, Mr Smith would have executive responsibility for PRISMOD. Until a couple of months ago, I had executive responsibility for PRISMOD.

**Senator MURRAY**—Would the same apply to TRYM?

**Dr Henry**—No. I currently have executive responsibility for TRYM.

**Senator MURRAY**—And formerly, before your appointment?

**Dr Henry**—No. The third executive director in the Treasury, our colleague Mr Potts, formerly had executive responsibility for TRYM.

**Senator MURRAY**—They are the only two models that have been mentioned. Are there any other major models that Treasury has?

**Dr Henry**—Yes, indeed. The Treasury has quite a number of very major models that are used in the retirement income and related areas. They are models developed by the Retirement Income Modelling Task Force. Again, Mr Smith has executive responsibility for those models.

**Senator MURRAY**—Were any of those models employed in this exercise?

**Dr Henry**—The Retirement Income Modelling Task Force undertook the HES based distributional analysis that we put before the government in putting together this tax package. It is not a retirement income model. However, we did ask those people to put together that distributional part of PRISMOD on this occasion.

**Senator MURRAY**—Is there an acronym for the retirement income model?

**Dr Henry**—There are several retirement income models.

**Senator MURRAY**—If we were to refer to PRISMOD or TRYM, everyone would know what we were talking about. How can we refer to the retirement income model that is relevant in this exercise?

**Dr Henry**—We refer to it in Treasury as PRISMOD.DIST.

**Senator MURRAY**—The PRISMOD model that we have considered so far is a medium-term input-output model that focuses on price effects. It is an industry based model on the 107 industry components. Is that correct?

**Dr Henry**—That is correct, yes.

**Senator MURRAY**—The TRYM model is a short-term transitional effects model. Is that right?

**Dr Henry**—That is correct. It is a macro model.

**Senator MURRAY**—The PRISMOD model does not deal with household effects. To do that, you introduced this additional DIST component?

**Dr Henry**—Correct.

**Senator MURRAY**—Is it on that basis that you arrived at your distributional consequences?

**Dr Henry**—No.

**Senator MURRAY**—How did you arrive at your distributional consequences?

**Dr Henry**—We did two types of distributional analysis. One type of distributional analysis using the household expenditure survey, the HES, did use the PRISMOD.DIST model. It is the retirement income model and the task force's model. However, that is not the distributional analysis that appears in the document. The distributional analysis that appears in the document applied the same average price change to every household. That average price change was simply the CPI effect. One does not need a model like PRISMOD.DIST to calculate the CPI effect.

As I explained earlier, we calculate the CPI effect from PRISMOD itself. PRISMOD generates changes in the prices of the outputs of each of the 107 industries and changes in other prices which are also relevant. We map them across to the CPI expenditure subgroups at 108 level. From the CPI weights themselves quite directly, we get an estimate of the change in the CPI. You do not need—in fact, it is inadvisable—to go through the household expenditure survey in order to arrive at the economy-wide consumer price index effect. You can go directly from the changes in industry prices to the official CPI weights and calculate the change in the CPI. We use that single number—the 1.9 per cent—to infer the impact on the average cost of consumption of every household type in Australia. That is what is actually reflected in the document.

It is very different from the PRISMOD.DIST analysis. The PRISMOD.DIST analysis, which we also presented to the government and which has been made available in recent weeks but is not reflected in this document, takes expenditure information from the household expenditure survey for all of the roughly 8,000 households that are on the unit record tape of the household expenditure survey. We take the expenditure information for each household. We use the price changes which come out of PRISMOD at the 107 level and subject all of the consumption items—the expenditure items—in each of those 8,000-odd households to change based on those price changes that come out of PRISMOD. We then calculate for each household specifically the change in its average cost of consumption.

Think about it conceptually. If the average CPI effect is 1.9 per cent, you would expect, if you looked at any individual household in Australia, that it would typically have a household specific price effect—a unique one for it—which would be perhaps close to the 1.9 per cent. It might be slightly higher or slightly lower, because its expenditure pattern, in general, will differ from the CPI weights. The CPI weights are one possible expenditure pattern. It is an average pattern but it is not actually an average pattern across all households.

This is getting a bit technical now. The CPI does not attempt to be representative of all households in Australia. It represents those households whose principal source of income is wages and salaries, that are in capital cities and that are not in either the top 10 per cent or bottom 10 per cent of households by income. That is the focus of the CPI.

You would expect that households would have a price impact for them which, as I said, might be reasonably close to the 1.9 per cent, but it could be higher or less than it. It depends on how their expenditure pattern stacks up against the CPI weights.

In theory, a household expenditure survey database would be precisely the database you would want to use to make those assessments. A household expenditure survey in concept will tell you for all of the households in the sample their actual expenditure, specific to them on each of the commodities they purchase. You could then check the expenditure pattern against the expenditure pattern in the consumer price index. You could compute their individual price impact. That is what you would do, in concept. In 1985, when we first started this sort of work, that was precisely our motivation for using the household expenditure survey. We worked with the Australian Bureau of Statistics to try to do this sort of work in 1985.

In 1985, there was no such thing as a household expenditure survey unit record tape. It was not published or made publicly available. It did not even exist within the Australian Bureau of Statistics. Nobody had ever done this sort of work. We had the Australian Bureau of Statistics produce the first ever unit record tape for the household expenditure survey in 1985. As soon as we did that and we started pulling out results, we discovered major deficiencies with the household expenditure survey for this type of work.

In particular, we discovered that the gap between income on the one hand and expenditure on the other hand is not reliable. You certainly cannot interpret that gap as a measure of saving. It is natural to do so because, after all, it is just a definition; saving is the gap between disposable income on the one hand and expenditure on the other. But when we looked at what was implicit in the household expenditure survey data set, we found that you simply could not make that inference. The ABS, in reviewing our results in 1985, felt moved to include in every household expenditure survey publication since 1985 a statement to the effect that one cannot use the household expenditure survey to make any inferences about household savings. That is just one of the problems.

**Senator MURRAY**—I want to explore a particular direction. The inquiries about modelling are likely to go in two broad directions. The first is the one already covered by my colleagues on my right, which is the economic direction of inflation, GDP, jobs, revenue and those sorts of things. The second is the area of equity and fairness, and the consequences of this tax package.

The equity direction will go in two further directions: one is the industry level—how fair will it be to particular industries, businesses and business groups in terms of the effect; the other will be at household level. My expectation is that the prime focus in the equity argument will be at the household level, not at the industry level, although that should not be discounted. Really, the only source of data we have for household information is the HES. At the aggregated level, it is valid and you can make fairly broad assumptions.

**Dr Henry**—Perhaps I should stop you there.

**Senator MURRAY**—You can respond to me when I have finished giving you the framework in which I am asking my questions. At the aggregated level, you have broad assumptions arising out of the 8,700 surveyed households which could be broadly considered valid. As soon as you try to disaggregate it and get down to small cameos of household numbers, your margin of error soars.

**Dr Henry**—Yes.

**Senator MURRAY**—So we all understand that. From all your answers to the previous questions—and why I stopped you in the middle of the flow of your answer to my questions—it seems to me that the weakest area of your modelling capability—and this is not a reflection on your professionalism; it is a reflection on the empirical data and its substance—is the distributional area. It is very, very difficult for Treasury and the government to accurately compute the consequence of its measures at the household cameo level. That is really what I want to draw out from you. You, as a professional, have clearly

expressed to us where the limitations of the models lie. Are you in agreement with me that the most difficult area is, indeed, at the distributional household level?

**Dr Henry**—Yes, indeed. There really is only one of your statements that I feel I need to pick up on—that is, disagree with. That is your statement that, at the aggregate level, the household expenditure survey is valid. Even at the aggregate level, the household expenditure survey is not valid—or, at least, let me put it this way: if the household expenditure survey is valid, then the Australian national accounts are wildly inaccurate and the CPI is even more wildly inaccurate.

Let me explain. Suppose you use the household expenditure survey unit record tape, the 8,000 households, and you go through and pick out each of the households that falls within the definition of CPI-type household—that is, principal source of income being wages and salaries—yes, it resides in a capital city; no, it is not in the top decile and it is not in the bottom decile. If you put them all together and add up all their expenditures and compare their average expenditures on items with what is in the official CPI, you will find marked differences.

For example, you will find that the proportion of their total expenditure which they claim to devote to tobacco is only about 50 per cent of what the CPI says they devote to tobacco. The proportion of their expenditure which as a group they claim in the household expenditure survey to devote, on average, to boys' clothing is 35 per cent different from what the CPI says people actually spend on boys' clothing. These are not minor differences; these are major differences. Both of these data sets are ABS data sets.

Let me make one other background point. Why does the household expenditure survey exist? The household expenditure survey exists in order that the ABS has some way, some data, to rebase the CPI. But, if that is the case, how can the two data sets be so radically different? Answer—and it is the only available answer: the ABS does not believe the HES. The ABS takes the HES results. It then uses a lot of judgment, a lot of guesswork, a lot of manipulation in order to manipulate those results of the HES to produce the official CPI weights. That is what it does. It compares the household expenditure survey estimates of total expenditure on boys' clothing to what it observes in the national accounts, and it says, 'Well, hang on, that can't be right; so we'll just replace that HES information with the national accounts information that we have from an alternative source.' It produces the CPI on that basis.

So, even at the aggregate level, the ABS is saying that the household expenditure survey does not provide an accurate representation of household expenditure patterns. But the ABS has developed over a long period of time a technique based on judgment, guesswork, whatever, for adjusting the household expenditure survey data at the aggregate in order to produce the CPI. The challenge before people who would wish to model the distributional implications of this package is not to do that at the aggregate but to do it for every one of the 8,000 households. That is what you have to do. There is no modeller in Australia or elsewhere who can do it.

**Senator MURRAY**—It is true that the HES and the CPI are coincident in a number of areas and divergent in others. You have mentioned divergences such as the sin taxes—

alcohol and tobacco—and you have mentioned boys' clothing. We are aware that expenditure surveys have problems with occasional purchases, what they call 'lumpy expenditures'. You have lumpy income problems as well. So we are aware of the limitations.

The fact is though that it is used as a confirmation and check, if you like, on the national accounts data. So where it is divergent you can explain the differences and try to come to an experiential judgment; and when it is coincidental you regard it as valid. So it is not completely invalid, and you have made the point that it is not completely valid.

I want to move on from there, because I am sure that we will come back to HES in greater detail. But just to summarise for the committee: do you agree with me, therefore, that in this exercise the distributional area is probably the most difficult to accurately compute?

**Dr Henry**—Yes.

**Senator MURRAY**—The following is the second area of discussion I come to. It seems to me—and I will repeat my judgment of what you have said—that in your remarks, and, indeed, in the remarks of Mr Smith, you have quite properly indicated caveats, limitations, qualifications to the difficulties of modelling. A model is a set of assumptions and, therefore, there cannot be certainty in the sense of a finite certainty because of that situation.

The problem is though that, in the expression of the package, certainty is expressed and that is what you describe as point estimates. So, instead of the political populace and the populace at large being presented with a range approach, they have been given these point estimates. I will give you a few that we have mentioned today: 1.9 is inflation; 2.5 inflation in the first year; four per cent is a compensation figure that is floating around; 3.75 per cent I think is the GDP point estimate. It seems to me from what you have said that it is more likely that the focus from your recommendations to government would have been on modelling scenarios; in other words, you would have said, 'Given this range of assumptions, these are the plausible ranges we believe you can consider your policy consequences within.'

In the final documents before us, we had these finite figures. Did the Treasury, when it gave its advice to the government, provide the Treasurer with plausible ranges, or did you provide point estimates with appropriate qualifications and caveats?

**Dr Henry**—The latter. Can I just explain why? The former is actually something that we are not capable of doing, and I could not even begin to imagine how we could do it. The problem is that the methodology we use generates a point estimate. The question you are asking is: really, what sort of confidence intervals would we want to be able to put around that point estimate? The problem is: where do you get the data from that enables you to make an assessment of an appropriate confidence interval? That is where we have problems. We do not know where to get that data from.

One possibility would be that where you had a whole series of linked household expenditure survey data sets of good quality you might actually be able to make some inferences, and we looked at that. But, at the end of the day, we decided we could not come up with plausible ranges of that sort. Ideally, what you would want to be able to say is: look, you can be 95 per cent confident that the CPI effect for a particular household type or even

in aggregate lies between, let us say, 1.8 per cent and two per cent. That would be fantastic, but we do not know how to do it. So we felt constrained to—

**Senator MURRAY**—If I may interrupt, I am advised that in the United Kingdom and the Netherlands, for example, the modellers who advise government do put up plausible ranges, and it is then the government, the politicians, who have to decide on the point estimate for budgetary purposes—and that is obvious; you have to generate figures. I am surprised that you would not have given a range and, within the range, have given your choice of the figure for, for instance, budget estimates.

**Dr Henry**—For something like GDP growth, we would feel competent to generate a range of numbers; for something like employment growth, yes. Therefore, for things like projected growth in company tax revenue, projected growth in personal income tax revenue and so on, yes, we would feel competent to produce a range of numbers. You ask whether we would feel competent to produce a plausible range of price impacts for households of particular types or even in aggregate. I would say no, there I do not feel confident. The reason is that I do not have enough information about dispersion. I need to have some information about dispersion, and I do not have it—at least nothing I can rely on, and that is my problem.

**Senator MURRAY**—So, if somebody whom you respect in the modelling community said to you, ‘When people put out one number as their forecast, they are fooling you,’ would you disagree with them?

**Dr Henry**—No, there is a sense in which I would agree with that. In the sense of their saying, ‘This is where we will be, and that is it,’ and there is no uncertainty associated with the statement, then yes, they are fooling you because there is uncertainty associated with every point estimate.

**Senator MURRAY**—In other words, you have to avoid spurious certainty.

**Dr Henry**—You do, but by the same token you have to provide information. For one reason or another, point estimates are precisely the sort of information that the political process demands, that the financial markets demand and that social processes demand—not just in Australia but in other countries. It may well be spurious accuracy—indeed, in virtually all cases it is spurious accuracy—nevertheless, that is what is demanded.

I do not know really that it would be very helpful for us, for example, to say in the budget papers, ‘Well, we have 95 per cent confidence that the growth rate next year will be between 3.5 per cent and 2.5 per cent,’ or ‘We have 95 per cent confidence that we could actually have a budget surplus next year.’

**Senator MURRAY**—Given the macro effect within an economy of minor movements in, say, GDP, inflation and other things, those minor movements have huge effects on something as simple as government revenue, as an example.

**Dr Henry**—Yes.

**Senator MURRAY**—When you are dealing with questions of compensation, growth dividends, equity matters, greater competitiveness and so on, I would have thought public debate would be better informed by an acknowledgment of a range of possibilities—on which, incidentally, there is an upside as well as a downside—rather than the spurious certainty dedicated to individual point estimates.

**Dr Henry**—You are the politician. You would have a better feel, surely, for whether public debate would be better informed. But I do actually have a different view of it.

**Senator MURRAY**—But our problem, Dr Henry, is that the government and the Treasury have said that the consequences of this program will result in X dollars benefit to this kind of household cameo. Therefore, we have to make a judgment as to whether there is spurious certainty attached to those figures or whether there are a range of consequences. So it is not a political judgment; it needs to be a different kind of judgment.

**Dr Henry**—My view on that is probably hardly relevant to this committee. But, on the other hand, were one to produce a range of estimates the charge would presumably be—and I accept it would not be you making the charge; I suspect it would be other senators saying it—‘Hang on. How do people know? You have given them a range but how are they meant to know where it is in this range that they are expected to fall? All you have done is create uncertainty.’

**Senator MURRAY**—Let me give you an example of my problem. I think Mr Murphy has guessed, if you like—intelligently guessed—that GDP growth as a result of this program could be as high as two per cent. That would be the upside, I guess. I understand the Treasury adopted a conservative assumption of 0.5 per cent. Professor Dixon suggested it would be a lot less. If the Treasury had said, for instance, ‘If you look at the range between Dixon and Murphy, we actually should assume nought per cent, not 0.5 per cent,’ it would have made a very considerable difference to the revenue figures.

To return to the question put earlier, we have to respect—and we do respect—your judgment and trust your abilities in that area. But if you were wrong on that 0.5 per cent, the consequences in terms of what would be available in the surplus or what would be available to distribute, et cetera, would be significant. Given the respect in which we hold you, Professor Dixon of Monash and Mr Murphy, how would we make a judgment there?

**Dr Henry**—That is indeed one of the tough questions before this committee, and I am not sure that I can help you very much with it. Let me make two points. We were aware of studies that had figures somewhat higher than Murphy’s. Murphy is not at the top end of the range. Bear in mind also that Dixon’s work was not available when we were making these judgments. In fact, we still have not had an opportunity to have a detailed look at Dixon’s work, although I have had enough of a look at it to have satisfied myself that I have substantial problems with it. I have some strong reservations about it, let me put it that way. We were looking at a range of estimates. I think two per cent was close to being the bottom end of the range, not the top end of the range.

**Senator MURRAY**—I thought it was a respectable top.

**Dr Henry**—I think some of the people who have got much higher figures than that are also quite respectable economists. As to the second point, I really do not know how to help you with the issue that, at the end of the day, you are going to have to take somebody on trust. We in the Treasury, when we put together the budget numbers every year, settle on point estimates. When the government publishes those numbers, the government is asking the Australian community to trust us with regard to the point estimates that we have selected. In the budget figuring that lies behind this particular document, we have done the same thing. We have settled on a point estimate and the government is asking that it be taken on trust. It has always been thus. I suspect it will always be thus, and I really do not know that there is much of an option.

**Senator MURRAY**—If there is a range of that sort—and I think we can accept from your answers that there is—isn't it prudent and practical for any government, and indeed for any political body, to look for a cushion to account for the margin of error?

**Mr Smith**—Can I intervene here, Senator, and say that there is just as much risk in underestimating as in overestimating in terms of its potential impact on public policy decisions.

**Senator MURRAY**—I understand that. That is why I am searching for whether there is an appropriate cushion.

**Mr Smith**—This is my point. A cushion implies that you always want to be biased in such a way that you may have, for example, a larger surplus than you expected. The better course is to try to find the best figure you can and not to have a predisposition to be under or over. In this particular exercise we have regarded the figuring that we have done as conservative. So I guess in one sense there may be some cushion there. We have described it as conservative in the submission we have given you because we had figures as high as 3¾, which were published in ANTS. I gather from the media that Access has this morning come out with a figure of 2.5 on the actual package, as opposed to the other figures of course, which were done on smaller tax reforms than the one actually announced by the government. So when you say Murphy had two, that was on the particular single smaller tax reform that he modelled there. We have done more than that in this package. So it is a judgment call.

But I would take issue with you with regard to the view that we should traditionally bias all of our estimates to create cushions, because there are risks to public policy decision making on both sides of any mid-point estimate. We have always tried to get it as close as we can. What the Treasury has done in its budget papers has always pointed to the risks. 'Confidence intervals' is a technical concept which we do not think is usually reliable or helpful, but we do point to the risks. The spuriousness of accuracy occurs in the selective reading of what we do rather than in what we present.

**Senator MURRAY**—As you can guess, I am probably implying that there is a distance between your own presentation of your views and those which finally enter the political arena.

**Mr Smith**—I am not responsible for the political arena, Senator.

**Senator MURRAY**—Or the Treasurer. Back to the modelling, Dr Henry. For modelling to be most capable or to be most accurate in a predictive sense, it is best for it to have a valid historical basis, because, from past behaviour, you can infer future behaviour. That is standard practice.

**Dr Henry**—There are some limitations to that approach.

**Senator MURRAY**—There are, but all good models have a sound predictive view based on history. The difficulty you have expressed, of course, is that it is difficult to transpose international experience with, for instance, the application of a GST to the Australian circumstance. Nevertheless, it is the only history we have got available to us. We have to look at what other countries have done.

I noticed in your submission to the committee that when you were discussing food, for instance, you mentioned only the United Kingdom and Canada in that submission, and yet there are 23 OECD countries which deal with food on a discriminated basis—either zero or differentially rated or exempted. Did you, in a historical predictive sense, examine all the countries which have applied the GST? I know, for instance, that Denmark started in 1967 and might have been one of the first. Or did you just select a few? And if did you select a few, which ones?

**Dr Henry**—When you ask if we looked at these countries in a historical sense, for what purpose would we look at them? What sort of information?

**Senator MURRAY**—I tried to give you a fairly long lead-in so that you would understand where I was coming from. I am saying that you have no history in this country of the introduction of a GST, that the history is all international. I am saying that, of the 27 OECD countries, as I understand it 23 deal with food, for instance, differentially.

In reply to an earlier question, you said you found great difficulties in applying their experience to the Australian experience. I want to know, when you were looking at the international experience, whether you looked at all the countries which have put in the VAT or just some. If it was just some, I would like to know which ones. You can take it on notice if that is difficult.

**Dr Henry**—We examined the legislative and administrative practice in a subset of those countries, certainly not in all of them. Our interest was primarily in discovering the workability of special treatment for food. So we looked at a subset of countries that had special arrangements for food. We gained an impression of the workability of their arrangements from a legislative and administrative point of view. We did not examine the impact in any of those countries on distributional outcomes of the exemption of food. Indeed, it is no easier to make an assessment *ex post* of the distributional impact of something than it is to make the assessment *ex ante*; you have got exactly the same problem. It is precisely the same. So there would have been no point—zero point—in undertaking that exercise.

**Senator MURRAY**—Let us walk away from food if you wish and talk about other consequences of the introduction of a GST or a VAT system, such as on the black economy,

such as on jobs, such as on GDP growth—on any of those things. Have you attempted to evaluate VAT on the historical basis of all those countries' introductions of a GST?

**Dr Henry**—No, we have certainly not attempted to make an evaluation of the experience in all of those countries. We are aware of some international work that has been done, particularly by the OECD, that has looked at the sorts of macro-economic impacts of tax reform in a number of OECD countries. The OECD study is cited in the government's document. So we have reviewed experience at that level. But we have not undertaken our own empirical investigation of the impact on key macro-economic variables of tax reform experience in other countries. We have not done any of that work ourselves.

**Senator MURRAY**—I raise these questions because the difficulty for us in this area is that, whilst for instance you have a very credible PRISMOD model and we can compare that to other models, if you have not done that international comparison and we get critics arriving in front of this committee saying, 'Look, these are the bad things that happen in Canada or Japan or New Zealand,' or wherever and other people say, 'These are the good things that happened in the UK,' if someone has not done a holistic appraisal of both the negatives and the positives, it is quite difficult for the committee to have a reference point, if you like, to evaluate those on.

**Dr Henry**—I understand that. My advice to the committee would be that you have a look at the OECD material which is cited in the document. That provides the best heuristic assessment of the experience in OECD member countries.

**Senator MURRAY**—Mr Chair, I have many, many more questions but I do not want to monopolise the floor. If I do not get through them this afternoon, I will put them on notice, if you are content with that.

**CHAIR**—If you are content to rest at this point, I will ask someone else.

**Senator MURRAY**—I am. I have a couple more pages and I am sure you have as well.

**CHAIR**—I am sure everyone has. We have Treasury until 3 o'clock with an intervening hour for lunch. My sense is that we will not get through our questions as a committee but, in terms of scheduling future appearances, we will need to see Treasury again in any case before we complete this reference.

**Senator MURRAY**—As a courtesy then, I think I should cede the questioning and come back to it later if you will allow.

**CHAIR**—All right. I have not directly called Senator Brian Gibson or Senator Nick Sherry. I mention that now in case either wishes to seek the call. If not, it is my intention to call Senator Harradine.

**Senator GIBSON**—Go ahead.

**Senator SHERRY**—I have a couple more points, but I have asked some questions so Senator Harradine might like to go.

**CHAIR**—Okay.

**Senator HARRADINE**—Thanks. I am not sure to whom I should ask these questions. They are simple questions requiring a simple answer.

**Mr Smith**—Senator, just ask them and we will see who is best equipped to answer them.

**Senator HARRADINE**—They relate to the nature of a consumption tax. What is consumption?

**Mr Smith**—It is a very good question. Essentially, with consumption, what we are dealing with for the purposes of this tax is household expenditures, and that is distinguished from savings or investment. The basic idea of this tax is to have it incident on that part of the resources of the household which are applied to meeting the day-to-day needs of the household, as opposed to the investment or savings of the household. In tax theory, an income tax taxes income whether it is saved or consumed and expenditure taxes and consumption taxes are aimed only to get that part of that total which is consumed. I do not know whether that is too simple or too broad.

**Senator HARRADINE**—So it is really expenditure and not savings?

**Mr Smith**—Put in those terms, yes. I think that is a reasonable way of putting it. I make the observation that savings often occur by expenditure on capital goods so the word expenditure can be a little tricky there, but I think you have captured the essence of it.

**Senator HARRADINE**—I am interested in what expenditure means. Do you have any other examples?

**Mr Smith**—It is on goods and services or other things which are, if you like, consumed in the reference period to add to the welfare or wellbeing of the household, as opposed to moneys set aside for a future period, which is what savings and investment is aimed at.

**Senator HARRADINE**—I will come back to that later. So consumption, for the purpose of this legislation, does not include expenditure on plant equipment or land or the costs of production?

**Mr Smith**—The tax is imposed on those things, but it is credited in order that the net effect is only on consumption.

**Senator HARRADINE**—In other words, to avoid the cascading effect.

**Mr Smith**—Yes.

**Senator HARRADINE**—So farmers who buy food for stock or buy diesel or whatever for the purposes of production would not be affected by this tax. Well, they would be affected but they would be able to have that as a rebate.

**Mr Smith**—They get the tax that may have been embedded in the price of those items credited.

**Senator HARRADINE**—It is a refund, yes. Did I hear you correctly when you said that consumption relates to the money that is spent on goods for the final use? It is the end consumption?

**Mr Smith**—I do not think I did actually say that. I did not use the words, but it is a reasonable description.

**Senator HARRADINE**—I am just trying to get it clear in my own head. The crucial aspect of the concept is that you do not tax inputs to and costs of production.

**Mr Smith**—That is true. Also you do not tax savings.

**Senator HARRADINE**—Understood.

**Mr Smith**—The fundamental difference between this type of tax base and an income tax base is that that part of income which is saved or invested is excluded from the tax base.

**Senator HARRADINE**—What are the inputs to and costs of production?

**Mr Smith**—Do you want some illustrations of what they are?

**Senator HARRADINE**—No. Is it capital?

**Mr Smith**—Capital and inventory.

**Senator HARRADINE**—Land and machinery?

**Mr Smith**—Machinery is part of the capital stock, yes. Also of course there are materials and other inputs such as services that may be used to transform goods or create other services.

**Senator HARRADINE**—Yes, but isn't supply of labour a necessary input to production?

**Mr Smith**—Yes, labour is also a service but that is excluded completely from the tax base. Employee remuneration is not in the GST base, if what you are going to is wages and salaries.

**Senator HARRADINE**—No. For a worker to be productive, he must first be born and also be sustained. Necessities of life must be provided for that worker to be able to take his place in the work force and contribute to the production.

**Mr Smith**—The purpose of the tax system is to finance various critical and essential goods and services which the political system deems best provided collectively. They are all essentials. So we need tax systems that generate those revenues, and the biggest and most

fundamental choices we have in those tax systems are between taxes on income and taxes on consumption. There is only so far one can go in making philosophical judgments about the best way to do that. I think every country, with perhaps some rare exceptions, has chosen to use both bases. It cannot make a clean decision between one or the other so it uses both bases and there are some good reasons for doing that. If both are used, it enables the particular rate of tax on either base to be less.

Various design features then have to be chosen in relation to both of them. In the case of the consumption tax, we do not tax wages as an input. Nor do we necessarily, in extending the philosophy of choosing that base, go to trying for some philosophical reason—that is not really pertinent to the fundamental decision of where best to impose a tax—to form a view that there is some essential productive input element in human existence, if you like.

**Senator HARRADINE**—Why not? It is absolutely essential.

**Mr Smith**—It is absolutely true but you are making a decision in tax choice between whether you tax their income or whether you tax their consumption. Either way you are going to tax them.

**CHAIR**—Or both.

**Mr Smith**—Or what we do is both.

**Dr Henry**—Can I add a slightly different perspective which might help with this, too. In the design of a value added tax or a goods and services tax, the principle is, as you have gone through, that a business pays tax in respect of those things that it sells and receives a credit or a rebate of tax on those things that it buys. That is the treatment for a business. Certain things may be zero rated or, as in the phraseology of this document, GST free if the business continues to receive a credit or rebate on the things that it buys but pays no tax on the things that it sells.

Then there is a third category of businesses which are exempt from the operation of the tax system. In this document, they are described as being input taxed. I think it is a more intuitive description of what is happening to them. An input taxed business does not receive a rebate or credit of tax on the things that it buys, but at the same time it does not have to pay tax with respect to the things that it sells or supplies into the marketplace.

Households, under a GST or a value added tax, may be thought of as an input taxed or exempt business. That is what they are. They do not get a credit or rebate of tax on the things they buy, but they do not get charged a GST on the things they supply. If you were to put them into the tax system, they would not only get a rebate or a credit of tax on the things that they buy; they would have to pay a GST, a value added tax, on the things that they sell, like their labour services, for example.

**Senator HARRADINE**—Could I just ask you a straight question on this quickly. Why is education exempt?

**Mr Smith**—Essentially, the government has decided to exempt a number of services, of which that is one. The fundamental reason is that a large percentage of the supply of education is free supply undertaken by government or agencies of government. It would have been inequitable, in the government's view, to have imposed the tax on that minority part of the education industry which is not supplied free by government. Therefore, the government has chosen not to apply a GST to education at all. A similar situation arises in health. There may be other reasons, but there is a fundamental problem there that a large part of both of those sectors is supplied free of charge as a government service.

**Senator HARRADINE**—Yes, they are supplied free of charge and the worker is not paying any GST for the services.

**Mr Smith**—Indeed the cost of those services would fall because there would be credits.

**Senator HARRADINE**—I understand. The worker must be maintained in health and must have a certain level of education, but the worker also must survive to be able to be a productive worker.

**Mr Smith**—That is not the rationale for the—

**Senator HARRADINE**—I am having difficulty trying to see why you would apply a GST on those necessities of life which are required by a worker for that worker to remain healthy and to even exist. Again, I come back to the fundamental point: is not the supply of labour a necessary input to production?

**Mr Smith**—I am not denying that it is, but you could well say that also it is necessary for that worker to provide that labour supply to get in their motor vehicle and drive to work. If we are going to have a tax base at all for the purpose of providing government services, you cannot really decide—as I think Dr Henry put it—to bring households into the GST net and then presumably provide credits for the wage GST that would result because the net effect then would be no GST—no tax at all.

**Senator HARRADINE**—There is income tax.

**Mr Smith**—Yes, we would be back to income tax. We would not have an indirect tax at all. Without wanting to venture into political issues here—I will leave that to a political judgment as to whether we want one tax or another—Treasury is not here to answer all of these questions in that way, not even to try to define the concept of necessities of life. Most of my education was not that necessitous, but I am not in a position to even imagine how one comes to a definition of that concept. I would leave that entirely to the sphere I believe it comes from and would stay in, and that is a political decision.

**Senator HARRADINE**—So really this whole scheme, for example, treats money expended in raising children, future workers, the same way as it treats the purchase of jewellery or overseas holidays. Is that logical?

**Dr Henry**—The same thing is true of an income tax, of course. You do not get an income tax deduction for the expenses of raising children.

**Senator HARRADINE**—I am fully aware of that.

**Dr Henry**—Sorry, I walked into that one. As Mr Smith indicated, perhaps the way to think of it is that a consumption tax and an income tax are the same except that the income tax taxes everything a consumption tax taxes, but it also taxes savings.

**Mr Smith**—It shifts the incidence.

**Senator HARRADINE**—You are talking about choice. Is it an optional consumption choice for a family to have children?

**Mr Smith**—I do not think we have said that having children is a consumption choice.

**Senator HARRADINE**—The point I was making is that you are treating expenditure on raising children the same way as you are treating jewellery or overseas travel—they are sort of an optional extra, if you like, or a choice if you have the money. That is why I asked you the very pertinent question: is it an optional consumption choice for families to have children?

**Mr Smith**—Implicit in the question is a view that children are a consumption choice, because you are asking whether it is optional. You are saying it is a consumption choice but is it an optional one. Is that the question? I have three children and I never saw them as a consumption choice.

**Senator HARRADINE**—In consumption terms, is it optional? Is that an optional choice?

**Mr Smith**—I am sorry if I am misunderstanding you, Senator. Are we talking about the decision whether to have children or are we talking about whether to feed them, et cetera?

**Senator HARRADINE**—Whether they have children.

**Mr Smith**—I do not know how optional it is. I imagine that would vary from case to case.

**Senator HARRADINE**—Is it optional for Australia not to have children coming on on the supply of labour and so forth?

**Mr Smith**—Senator, I want to be as helpful as I can, but I do feel that these questions are not ones to which we in Treasury have any particular value add to offer. Whether or not you could have a population policy that did or did not have children being born as part of it is something that I could give a personal view on, but it would not represent a Treasury view. I do not think we have discussed it in those terms in Treasury.

**Senator HARRADINE**—Has it been discussed in Treasury as to why we need this consumption tax? What is the reason we need it?

**Mr Smith**—The case for having a consumption tax?

**Senator HARRADINE**—Yes, why, in demographic terms?

**Dr Henry**—I do not believe we have ever discussed it in demographic terms. We have discussed a number of reasons as to why it would be desirable to have this sort of indirect tax change, this reform of the indirect tax system, but we have not discussed it in demographic terms.

**Mr Smith**—Perhaps I could say, though, that we do not believe that the package would create any new disincentives or necessarily incentives or disadvantage or advantage for those with children relative to those without. I was talking about the GST side of it.

**Senator HARRADINE**—Why?

**Mr Smith**—Because basically even the HES analysis, which was released a few weeks ago, does not show, other than for single and married pensioners, a significantly different CPI effect from the average. In other words, families with children have a very similar CPI effect to the average—in fact, some of our results have a lower CPI effect for families than for the average.

**Senator HARRADINE**—No doubt there will be an opportunity at some stage to come to the question of compensation. Isn't one of the reasons that has been proposed around the place about why treasurers and so on want to go down this track—and it has been suggested in the literature—the ageing population?

**Dr Henry**—The argument there is that a GST, because of its broad coverage, provides a much more secure revenue base going forward than the existing very narrowly based wholesale sales tax system. In fact, it is even worse for the states if you look at their stamp duties, their financial institutions duties and so on. The broader base should provide for a more robust source of revenue going forward. In that sense, one could see it as making some sort of contribution to intergenerational equity issues.

**Senator HARRADINE**—On the question of savings, what households are most likely to make the savings—the income areas? You have the figures on that, I assume. Surely it is axiomatic that households with kids and on lower incomes are less likely to be saving than households without kids and on higher incomes.

**Dr Henry**—Can I make a couple of points about that. It may well be axiomatic, but there is precious little evidence available in Australia to support it. That goes to comments that I made earlier about the lack of data, frankly. The only data set that could potentially provide an answer to the question is the household expenditure survey, but it does not provide any estimates at all in fact of household saving, and the ABS makes that quite clear. That data set is not there.

The other point I would make is theoretical rather than empirical because I am not actually sure what the empirics would show given the paucity of data. The theory would say that any particular household going through its life cycle would be likely to be saving less when it has the expenses of children than when the children have grown up and left home or perhaps before the children were born. But, if you look at it that way, that suggests that,

when one is thinking about the saving behaviour of a household, it is misleading to look at a household at a point in time.

A household with five children at home currently might next year have no children at home or certainly in five years time might have no children at home and in that period of its life may be saving a lot of money, a lot of income, in order to prepare for the retirement of the parents. So taking a snapshot at a particular point in time and worrying about whether you have enough compensation for people who are suffering the unusually high costs of raising children at that particular point in time can be rather misleading because those same people will benefit from those higher levels of compensation later in their lives as well.

**Senator HARRADINE**—Is it a fact that lower income households will be paying a proportionately higher level of GST payments than a high income household?

**Dr Henry**—We cannot say that that is a fact.

**Senator HARRADINE**—Why?

**Dr Henry**—As I said earlier, firstly, do they experience different price impacts? That is, if you just look at their expenditure—let us forget about income for the moment and just look at what they spend—is it the case that low income people spend more on those things that will go up in price a lot and high income people spend more on those things that will not go up in price very much? Is that a fact? Apparently that is not a fact.

**Senator HARRADINE**—What you have said in answer to my first question is that consumption does not include savings.

**Dr Henry**—Correct.

**Senator HARRADINE**—Then the higher income families are saving more as a percentage of their income than low income families. Therefore, is that not axiomatic?

**Dr Henry**—This is my second point: you say it is axiomatic; we have no data which supports your axiom. Of course, axioms do not need data. If it is truly axiomatic, we do not have a problem. Let us suppose that it is a proposition. It would be nice to have some data to support it, but we do not have data to support it. We do not have data in this country which can be used to demonstrate that, systematically, higher income people have higher saving rates than lower income people. There is a good deal of economic theory which suggests that it should be the case but, as I said, the only data set that could possibly address the question would be the household expenditure survey data set, which cannot be used for this purpose.

**Mr Smith**—Without the data, it seems extremely likely, Senator, that what you are saying is true. In our presented cameos, we assumed a zero savings rate. So we are assuming in those figures that there is no saving at all.

**CHAIR**—Throughout the income range?

**Mr Smith**—Yes.

**CHAIR**—So there are no savings at higher income levels or lower income levels?

**Mr Smith**—That is right.

**CHAIR**—No savings at all?

**Mr Smith**—From national accounting data we know that there is a small household savings ratio, but it is about four or five per cent at the moment—and obviously it moves from year to year. We used zero.

**CHAIR**—On the question that Senator Harradine raised—whether the propensity of higher income families to save more than lower income families is an axiom or a strongly held assumption—

**Mr Smith**—That may be true only at the highest end, in fact. It may be that the bulk of saving occurs at the very high end.

**CHAIR**—The proposition has a sort of logical appeal. Did you model that in terms of the distributional issues?

**Mr Smith**—We assumed zero all the way through.

**CHAIR**—So you did not model it?

**Dr Henry**—No, and we achieved that by focusing on the concept of change in real disposable income, which really abstracts from the savings rate issue. It says we are looking at your total income—we will take your total income as it is at the moment—and we will give you some income tax cuts, we will give you some increases in social security payments and we will give you some increases in family benefits. That gets a new disposable income, and then we will deflate the whole lot by the CPI increase. So we will say that in nominal terms it has gone up by X dollars a week but in real terms, given that the price level has gone up as well, it has gone up by less than X dollars per week. So we deflate the whole amount of income.

That measure is called a change in real disposable income. It avoids using the savings rate concept, but implicit in it is the notion that savings does not matter—that you should focus on what happens to the value of people's income and it does not matter what happens to their savings as opposed to the value of their consumption.

**Senator MURRAY**—But dissaving matters because dissaving is about expenditure.

**Dr Henry**—Yes. The other bit of thinking we did was to question the sensitivity of the results to savings behaviour. It is tempting to believe that, if somebody is dissaving 10 per cent of their income, there is a problem in this package for them. But if you think about it, if you are dissaving 10 per cent of your income, that has the effect in expenditure terms of increasing the 1.9 per cent figure by 10 per cent—that is all. So, instead of talking about 1.9

you are talking about 2.09 per cent—that is all. It is not a major effect. A 10 per cent dissaving rate pushes a 1.9 per cent CPI up to an effective 2.09 per cent of consumption. It is less than 2.1 per cent, so it is not a big effect.

**Mr Smith**—A 10 per cent dissaving rate was the highest dissaving rate assumed in the 1985 package based on the HES then. That was the highest; most of them were minus 5 per cent.

**Dr Henry**—I am sure you will have people come in front of this committee in the next day and a half and make the point that those people dissaving are a real problem. But if you do the simple arithmetic—the sensitivity analysis—unless you have a very big dissaving rate, it really cannot be a problem.

**Mr Smith**—With HES analysis over two weeks, you can get huge dissaving rates for an individual.

**Dr Henry**—Yes, over 300 per cent.

**Mr Smith**—Yes, if you buy your Hoover that week. One obviously has to take a more realistic and longer term view. So the time profile on this is critical. You would not want to take unit record data with a two-week assessment period and make any major conclusion from it.

**Senator MURRAY**—My point is: like everything else you take into your modelling assumptions, where dissaving occurs—such as with students, retirees and people who are unemployed for the short term—that needs to be computed into your analysis, which I assume you would do to arrive at real disposable income.

**Dr Henry**—No. To arrive at real disposable income, as I said, the saving rate is irrelevant. That is because of what real disposable income means—it is a tautology. If you do not accept that one should be using that measure—a change in real disposable income—but instead think one should be using some other measure such as computing the difference between the increased cost of expenditure on the one hand and the additional disposable income on the other and then measuring the change in that gap, which is really like measuring the change in the real value of saving, then you would have a different measure. That different measure is the one that I was describing earlier when I said that, if you have got a 10 per cent dissaving rate, it is tantamount to assuming a 2.09 per cent CPI instead of a 1.9 per cent CPI. So you can do that sort of sensitivity analysis, adjust the numbers in the document—it is quite easy—and see what difference it makes.

**Senator MURRAY**—But you are itemising the effect. I am prepared to concede that the effect may not be as large as some people may consider. But, when you are considering real disposable income, you are saying that after tax this is the amount of money you have to spend.

**Dr Henry**—To spend or save.

**Senator MURRAY**—To spend or save, yes. People who have a real disposable income which does not leave any margin for saving will dissave, so they have the amount of money which is left after paying taxes and whatever else and then they take a portion of money from previous savings. This includes such people as retirees or students who draw on moneys from other sources. That is what we have to look at.

**Dr Henry**—You are saying that the measure of real disposable income does not capture the reduction in the real value of accumulated wealth—for example, a stock of savings that you have got sitting in a bank account or invested somewhere has a lower real value because the price level has gone up. Every bit of inflation erodes the real value of wealth that is sitting there in a monetary form. That is the effect you are talking about.

The change in real disposable income does not capture that effect. Special compensation arrangements have been included in the package for principally self-funded retirees but also age pensioners who may have some savings sitting in a bank account or whatever and who are using that to supplement their income. I think that is the way it should be thought of; it should be thought of as a wealth compensation issue.

**Senator GIBSON**—Treasury has been interested in major tax reform for a long time. Have you organised with the ABS, over any period of time when there have been significant tax changes, for any empirical work to be done pre and post the tax changes on the same households to pick up changes in household expenditures before and after? Or is the level of precision in that sort of work too wide to pick up those sorts of changes?

**Mr Smith**—The ABS's forward program for conducting research usually has a much longer time frame than the time frame in which tax reform proposals are created and delivered.

**Dr Henry**—I do not recall any such work ever having been done with the ABS. It is obviously an interesting question. For example, given the differences in relative prices—some prices going up and some prices going down—affecting all commodities that households consume, what sort of impact is this likely to have on household expenditure patterns? You might see households spending less on tobacco and spending more on motor vehicles, for example. In principle you would be able to get some idea of that from a household expenditure pre-change and post-change survey. When the ABS comes to producing the 14th or 15th series CPI, you will see different CPI weights from those contained in the 13th series CPI. Some of that—we would have to question how much—would no doubt be due to the government's tax reform package, presuming it was legislated.

**Senator GIBSON**—I was wondering whether there was any empirical work done for the 1993 changes or in the 1980s when income tax rates were lower.

**Dr Henry**—I am not aware of it.

**Senator SHERRY**—I asked you a couple of questions earlier about the PRISMOD model and margins of error, Dr Henry. There was also a discussion about best informed guesses. You could not give me a ballpark figure on the margin of error in the PRISMOD model, but can you give me a best informed guess?

**Dr Henry**—No, Senator, I am sorry. I thought I had indicated that I am not competent to do that.

**Senator SHERRY**—On the issue of best informed guesses, you and Mr Smith talked about having to use economic judgment and to some extent modelling, on occasions making assumptions that were not much better than a guess, and having to be very cautious in general about the conclusions and the accuracy of figures. Do you think that caution should apply to people in the community other than economists?

**Dr Henry**—I think I can see where this is leading, Senator.

**Senator SHERRY**—You are saying economists should be cautious and you have been emphasising, rightly, caution all morning.

**Dr Henry**—From the perspective of a Treasury economist my view is that, once I have provided advice to the government, that is where my responsibility for the subject matter ends. I think it is appropriate that Treasury economists provide suitably qualified advice. I think that is appropriate, but that is a responsibility on us.

**Senator SHERRY**—You have talked about economists and people in Treasury generally and the approach to modelling. Mr Smith, do you believe that people in the wider community should be similarly cautious?

**Mr Smith**—Frankly, I would not presume to make a comment like that.

**Senator SHERRY**—So you would apply the comment to economists but you are more reluctant to apply the caution to anyone else in the community.

**Mr Smith**—You are using a phrase which encompasses the entire population in presumably a myriad of potential contexts, and I think the context would have to be taken into account as to what we would expect of members of the public.

**Senator SHERRY**—Dr Henry, in response to questions from Senator Murray you said you felt confident about figures in respect of growth and employment but you did not feel confident about the CPI.

**Dr Henry**—I do not recall that, Senator.

**Senator SHERRY**—I think it is on the record. I am only paraphrasing and I am not trying to take you out of context.

**Dr Henry**—No, but frankly I do not remember making that remark.

**Senator SHERRY**—We will return to it at a later time when its relevance will become apparent. We also touched on the international experience—we had a discussion about Japan this morning—and you mentioned that you or the group had had a look at the international experience. I would like you to provide on notice some material about what you discovered

in respect of the international experience and the introduction of a GST, VAT or whatever it is called in other countries.

Following a couple of points that Senator Harradine raised, the claim is often made in respect of a GST, a tax on consumption, that savings should increase as a consequence. I notice page 4 of the tax reform document says:

It needs to provide more incentives to work, save, invest and compete.

The claim is often made that savings should increase. What do you believe will happen? Do you believe the savings ratio will increase in this country as a result of a GST?

**Dr Henry**—Perhaps I should explain what the theory says about this. The theory does not say that, if you introduce a consumption tax, savings will increase. That is not what the economic theory says. The economic theory would say that, if you introduce a consumption tax and that is all you do, nothing should happen to saving rates. That is what the theory says. The theory says that saving is discouraged by income tax, particularly by high marginal rates of tax.

The theory argues that a consumption tax is neutral with respect to the consumption saving decision—that is, we either tax it now when it is consumed or we tax it later when it is consumed. The stuff you tax later is saving today. A consumption tax is neutral with respect to the decision, whereas an income tax biases against saving. It biases you in favour of present consumption because of the double taxation that is implicit in the income tax system. The theory, therefore, says that the way to remove or reduce that bias in the tax system is to reduce marginal income tax rates. That is the theory.

**Senator SHERRY**—That is the theory. What is the practice?

**Dr Henry**—The empirical evidence is rather mixed. I think I have tendered that in evidence to the Senate Economics Legislation Committee over a number of years. The empirical evidence is very mixed. There are some studies which show that, as marginal income tax rates are lowered, household saving goes up—not in any of those studies by very much, but it goes up. There are other studies which show that there is not much effect. I do not believe there is any study which shows that it goes the other way, although in theory that is possible. It is actually possible in theory for reducing income tax rates to discourage saving. That is possible, though I am not aware of any studies that have demonstrated it. The empirical evidence is somewhat mixed, one would have to say.

**CHAIR**—I wonder whether this might be an appropriate point at which to adjourn. We are due back here at half past one precisely.

**Senator FERGUSON**—I would like to clarify one point. Senator Sherry asked a question with regard to page 4 and said that it needs to provide more incentives to work, save, invest and compete. He then asked whether a GST would do this. Page 4 talks about a new tax system, which is more than a GST.

**Senator SHERRY**—Given the time—

**Senator FERGUSON**—It was not accurate.

**Senator SHERRY**—I phrase the questions as I choose to. Given time, I was going to develop this issue further to include the effect of the tax package as a whole on saving, but we do not have the time.

**CHAIR**—We have the time, but we do not have it now.

**Senator SHERRY**—I have one question which I would like to place on notice. There was some discussion earlier about the decline in the tax base in respect of wholesale sales tax. This is a claim that is often made in the context of this debate. Could Treasury provide an analysis of the historical record over the last 10 years of the estimates of revenue from each of the taxes which are proposed to be abolished or reduced? Can you identify each of those taxes separately? Can you also identify the annual rate of growth of each of those taxes? Can it be provided graphically as well?

**Mr Smith**—I will take that question on notice in the same way that I described in my opening remarks. That is, with this request and I expect many, many more requests for work to be done by the Treasury, we will have to take into account the implications for our resources.

**Senator SHERRY**—I want to emphasise, though, you make the claim, and it is continually made in this debate, that the base of the wholesale sales tax is shrinking. I hear the claim all time but I am yet to see the evidence.

**CHAIR**—We will adjourn for 55 minutes and return here at half past one.

**Proceedings suspended from 12.35 p.m. to 1.30 p.m.**

**CHAIR**—I have a couple of questions from issues that arose this morning. First of all, under questioning from Senator O’Chee, I think Dr Henry remarked that all the growth estimates looked positive from the various models or input that the Treasury had received. Is that a correct recollection?

**Dr Henry**—Certainly with respect to the modelling work that we were aware of.

**CHAIR**—I asked just then for the record. On page 11 of the Murphy attachment to your submission to the inquiry, under the third diamond point there is the following comment: ‘Overall, the value of GDP declines by 1.1 per cent.’ Then there is the next diamond point, and I do not understand the significance of both those points being taken together.

**Mr Smith**—Senator, perhaps I can quickly answer that. There is a confusion between real and nominal values. The minus 1.1 is a value figure, not a real figure. The table on page 2.2 gives you all the figures you are after.

**Senator CONROY**—Could you explain that a little more?

**Senator SHERRY**—Which page?

**Mr Smith**—The page headed ‘Scenario 2.2’. It is about page 3 of the detailed simulation results. I think it is also in the main report. I will just get you that reference.

**CHAIR**—Where am I looking on page 3?

**Mr Smith**—I am just going to get you a second place where that appears. It is on page 9 in table 4 of the main report. Would that be more convenient to you?

**CHAIR**—The main report being your submission?

**Mr Smith**—No, the main report from Murphy. If you look at that, you will see quantities, values and prices. They are the three different sets of data. The values are negative. The measured aggregates fall because we take costs out of the economy. But the real values, the quantities, which are the first lot, are two-plus per cent. So you have prices, values and quantities. The prices are minus three. So the deflator for GDP falls three percentage points. The quantity of GDP goes up two percentage points, so the net value—which is the combination of price and quality—is minus 1.1, and that is your dot point. That is the explanation. Real GDP—we are talking about the effect on the real economy—grows two per cent in this particular simulation.

**Senator CONROY**—But the value goes down?

**Mr Smith**—Yes, because the price falls more than the quantity goes up.

**Senator CONROY**—I am just trying to understand if a similar analogy is that of our exports, where we make increased export volumes but the prices we are receiving for them goes down. Is that a fair analogy?

**Mr Smith**—Not really, no.

**Senator CONROY**—Even though we have increased production and we are exporting more, the dollars coming into Australia overall are actually less.

**Mr Smith**—That is why it is not a correct analogy. Even if there were no effect on actual output, measured prices would fall. Offsetting that in terms of producing the net value figure is a two per cent growth of real value. The private consumption price falls in those figures as well. What is important here is the real effect.

**CHAIR**—And that is based on the assumptions set out there relating to quantities and prices. I am still looking at page 9.

**Mr Smith**—It has produced all three results is what I am saying. The one that we are talking about is the real effect on GDP.

**CHAIR**—I have one other related question. Under quantities, constant prices, on page 9, table 4, exports, if I rule across to exports, there is a 6.5 percentage change in the positive.

**Mr Smith**—Yes.

**CHAIR**—On page 11, though, further down the page, Murphy says in his diamond point:

. . . production costs in trade-exposed sectors decline by even more than 3 per cent because these sectors are capital-intensive in aggregate . . . mining is the most capital-intensive . . . and so reap a greater benefit from the fall in the cost of capital services.

In response, the exchange rate appreciates by 4.6 per cent.

Is that increase in exports of 6.5 modelled on the assumption that the exchange rate will appreciate by that amount—by 4.6 per cent?

**Mr Smith**—As I understand it, yes, because as you see from the price table it has export prices falling by 4.7 per cent. Typically in these models what you will find is that the cost or price effect on exports is assumed to be reflected in the exchange rate.

**CHAIR**—I think you just prefaced that question by ‘I think so’ or ‘I assume so’. Do you still have that qualification?

**Mr Smith**—It is typically true. Whether he did that exactly, I cannot answer.

**Senator MURRAY**—Did you say atypically or typically?

**Mr Smith**—Typically.

**CHAIR**—Can you take that on notice and give us an answer.

**Mr Smith**—I think you referred to the assumption, though, did you not, Senator?

**CHAIR**—Yes, I did.

**Mr Smith**—So therefore he must have.

**CHAIR**—I referred to the exchange rate appreciating by 4.6 per cent. I am asking you to confirm whether that increase in exports occurs with an appreciating exchange rate of 4.6 per cent.

**Mr Smith**—Yes. We accept Murphy’s results from Murphy. These results are fully internally consistent. It is presented as a fully internally consistent set of results.

**CHAIR**—That probably places greater weight on you, Mr Smith, to return your model modelled by the reasonable assumptions that I have posed to you in my letter to Treasury so we can see what different assumptions result, given, in particular, the reference to Senator O’Chee—that, after all, this is just a mess of assumptions.

**Senator FERGUSON**—I do not think he said ‘mess’.

**CHAIR**—My word is ‘mess’. I think he said ‘assumption’.

**Mr Smith**—‘Informed assumptions’ I think was my phrase.

**CHAIR**—The scenarios attached to the ANTS document are hard figures based on those assumptions. This is a point that I think Senator Murray drew out earlier

**Mr Smith**—Yes. I think it is worth making one or two quick observations there. The compensation package and the reductions in income tax are hard figures, and they make up a very large part of what is presented in the cameos. When you say that the cameos are based on assumptions, the benefits that are reflected there that derive from income tax cuts and from social security benefit changes are hard figures. They are not the result of modelling or assumption. They are based purely on putting hard numbers into the calculation. There is no risk. The bit that your remarks relate to is the fact that we have used the 1.9 per cent throughout as the percentage change in prices driving from the indirect tax parts of the package. That is the bit that relies on assumptions, because we are assuming that the data from the ABS on the CPI, et cetera is accurate. That is the bit and the only bit where the cameos rely on informed assumptions.

**CHAIR**—You do not have to give this down to the last cent, but can you give us generally a price for how much the Murphy modelling cost Treasury? I ask because we may need to undertake some modelling, and it would be interesting to get a comparison of what the costs to you were of that work.

**Mr Smith**—It is probably in our annual report, because I think we do report those things. I did not bring one. I really have no idea. I am sure we can get it for you, but I do not have any idea.

**CHAIR**—Thank you, Mr Smith.

**Senator FERGUSON**—Dr Henry, this morning in answer to some questions in your evidence you talked about some of the shortcomings of macro models in producing the macro effects of the tax package. Tomorrow we are going to be hearing evidence from several modellers who have published point estimates. I think in answer to a question from Senator Murray this morning you said that you had some reservations about Dixon’s work from Monash University. I am wondering if you could elaborate on what those reservations are?

**Dr Henry**—I am not sure from having read the paper that the entire package—or at least all of the dimensions of the package—has actually been modelled in the paper. Also, the results that came out in respect of GDP and welfare are a bit surprising. For this sort of model they are, I think, almost unique. So in that sense I have some reservations about it as well.

One has to be a bit careful how one interprets the results in that paper. The authors themselves are rather qualified in the reliance that they place on the results. Indeed, having found a small negative impact on economic welfare after some period of time, they hasten to note that they do not themselves interpret that outcome as being inconsistent with Murphy’s estimate of a positive impact on welfare, and they then conclude that maybe there is not really much of an impact on welfare at all. They seem to be a having a bet each way on a

three-sided coin. I think that is probably appropriate, because it is a little difficult to understand how the modelling could generate that sort of result. The author's own explanation for how that result—that is, a negative impact on welfare—could be generated is that anything which stimulates exports causes a decline in the terms of trade and that that is bad for welfare. That is paraphrasing their explanation, but that is the explanation that is given in the paper.

They also have an illustration in the paper of how one could get a negative impact on welfare from the relative price changes for consumption items. Their conclusion is that the package would have been welfare enhancing had it taxed health and education and not applied such high rates of tax to tobacco and alcohol. It is really not for me to say whether one should regard their welfare measure as appropriate, but I suspect that views could quite reasonably differ as to whether this package would be more welfare enhancing were it to tax health and education. I think there are some difficulties in the interpretation of the work, and one should be careful not to read too much into the results. In fact, the authors make that same cautionary remark.

**Senator FERGUSON**—We will also hear evidence from Hargreaves and Johnson tomorrow. Do you have any comments to make about any assumptions they might have made?

**Dr Henry**—If you are referring there to the work that was produced by Mr Hargreaves during the election campaign, frankly my view is that that work has no credibility. In terms of other work that has been done—you referred to Dr Johnson's work—I would have to know which of his work you are referring to. Some of Dr Johnson's work that was quoted again during the election campaign, for example, seems to take at face value the gap between income and expenditure in the household expenditure survey as being a measure of household saving. As I explained in evidence to this committee this morning, it is not valid to do so and the ABS itself makes the point that it is not valid to do so. I would not want to be overly critical of Dr Johnson's work. Just in that area, I think the reliance that was placed on the household expenditure survey data invalidates the distributional results.

**Senator FERGUSON**—If we are talking about Treasury's view about specifications of the models which produce these different results, what then is the level of sensitivity to the assumptions that are made?

**Dr Henry**—I think we also went through that this morning. The results are sensitive to the structure of the model—whether the models are able to accurately reflect sectoral phenomena. Some of these models are better able to capture sectoral effects than others. They depend also on what, in their jargon, is referred to as closure assumptions with respect to the foreign sector and with respect to factor markets, particularly the labour market. They depend also on the time dimension that you find in the model.

All of the various models that are around have different sets of assumptions in that regard. They are of different character as well. Some of them are dynamic computable general equilibrium models; others are more like macro-econometric models. They have quite different structures, and quite different interpretations have to be placed on the result. The overriding comment—and one that I made this morning—is that there really is no model

around which can, in our view, do justice to an assessment of the macro-economic implications of this package. Indeed, none of the pieces of modelling work that I have seen have incorporated all of the features of this package.

**Senator CONROY**—Many, or perhaps all, of the private sector models such as the Murphy model, which the Treasury has commissioned, purport to estimate the long run economic effects of the tax package. Can you explain what this means?

**Dr Henry**—The Murphy model and most of the dynamic computable general equilibrium models attempt to estimate not only the long run impact but also the time profile of key variables. So what you typically get in the form of output is a series of graphs, not just final year numbers. The interest in final or long run estimates is explained by the fact that, at least historically, economists did not know a great deal about paths of adjustment. What I mean by that is that most models were of a comparative static nature. You have a view of the world as it is at the moment. You subject the world to some sort of shock. Your model predicts where the world will end up, but it does not tell you very much about how you get from where we are now to that new point. More recently there have been attempts to track the time path, but the interest is nevertheless very much in the final outcome. That is because there is a lot greater confidence about the final position than there is about any precise time path to that final position.

**Senator CONROY**—Does this mean, in effect, that the actual effects—real world—that will happen on 1 July 2000 are not actually being modelled? You are saying that this is the impact at the end; you are not actually looking at, as you said, the pathway to get to that point.

**Dr Henry**—Some judgment has to be made about the time that it would take for the various effects to feed through. Looking at overseas experience we see that within about 12 months most, if not all, of the price impact of indirect tax reforms feeds through.

**Senator CONROY**—Are you able to table any of that data on the price impact?

**Dr Henry**—I think it falls into the category that Mr Smith was talking about this morning—that is, we will take that on notice.

**Senator CONROY**—The box at page 7 in the Murphy paper states:

Long-run models such as MM303 would only show the long-term increase in consumption, not the short-term reduction.

This appears to me to admit that there will be a negative impact on consumption when the GST is introduced. You said earlier in the day that there will be short-term effects going in all directions. Would that seem to be consistent with an argument that in the short term there are some industry sectors where employment will possibly fall in the short run?

**Dr Henry**—It is rather hard to judge.

**Senator CONROY**—But you are a best guesser.

**Dr Henry**—Yes, that is my job. It is rather hard to judge. There will be transitional effects—there is no question—where consumption and output in certain sectors will decline as consumption and output in other sectors increases. There will be sectoral shifts as a result of this tax package.

**Senator CONROY**—I do not think I noticed any analysis like that in the documents. Are you in a position to talk us through any of the sectors where there may be a negative impact—where those swings and roundabouts are roundabouts?

**Dr Henry**—No, I would not feel that I could do that subject justice this afternoon—certainly not.

**Senator CONROY**—Not even a best guess?

**Dr Henry**—No. I do not think that would be appropriate. I think the question you are asking is a very important question. I do not think it would be appropriate for me to attempt an analysis of it off the top of my head. On the other hand, I would point to studies that are around that have looked at that issue.

**Senator CONROY**—We have Murphy's here.

**Dr Henry**—I would not wish to add to it.

**Senator SHERRY**—Would it not have been appropriate to have included such an analysis in this document?

**Dr Henry**—No, for the reason that I mentioned earlier. None of these modelling exercises actually model precisely the government's package. None of them is capable of it. The best that one can hope to get out of these various modelling exercises in relation to the behaviour of macro-economic variables is a bit of an order of magnitude and some qualitative guidance.

**Senator CONROY**—But the assumption in the tax package that there is an instantaneous benefit almost on day 1 is a completely bogus position.

**Dr Henry**—I am sorry, I do not understand.

**Senator CONROY**—You have modelled cameos.

**Dr Henry**—Yes.

**Senator CONROY**—Who made the decision to use the second year CPI figure?

**Dr Henry**—I do not honestly remember, but if you want someone to take responsibility for it I am quite happy to do that. I do not remember where that decision came from.

**Senator CONROY**—This document was mailed to all Australians, explaining to them how much better off they will be on 1 July in those first year cameos. Those cameos are not

qualified by saying 'in a couple of years, maybe three or four years time, when the short run effects have worked through to the long run'. You have a situation where people believe that, according to this document, they will be much better off in the first 12 months. Somebody made a decision that you are saying you are prepared to take responsibility for.

**Dr Henry**—I think the document is quite transparent on this point.

**Senator CONROY**—Not at all—2.5 per cent does not get a guernsey at any point in this document.

**Dr Henry**—With respect, Senator, if one can add two numbers together, one gets very close to it. What does get a guernsey in that document is a number of 1.9 per cent plus a number of about half a percentage point.

**Senator CONROY**—It was beyond the wit of anyone to do that and put the number in there?

**Dr Henry**—Seriously, Senator, I doubt that it would be beyond the wit of any Australian to do that simple bit of arithmetic. I think that is the point.

**Senator CONROY**—Treasury did not feel the need to do the addition for them? It just put it in two different places and let people find it and add it up?

**Dr Henry**—They are not in two different places, Senator. I am not sure what it is you are wishing to suggest here—that something was hidden perhaps. I would reject that.

**Mr Smith**—I want to make two points for the record. First of all, the document was circulated by the authority of the Treasurer and it says so on the first page.

**Senator CONROY**—Dr Henry has just taken responsibility for one of the decisions in the document.

**Mr Smith**—I think he was talking in terms of the advice. We have made it clear all day that it is in the second year that we get closest to the full effects of the package. That is why the presentation was done that way.

**Senator CONROY**—But Australians who received it in the mail—

**Mr Smith**—But if you want the formal answer as to who takes responsibility for the document, it is written on the first page of the document.

**CHAIR**—That said, does Treasury take responsibility for the document as well?

**Mr Smith**—The document is entirely circulated by the Hon. Peter Costello MP, Treasurer of Australia. We take responsibility for the advice that was given to the government in relation to the document and the government takes responsibility for its own documents. That flows through to budget documents and has always been true.

**CHAIR**—So there was a process after you gave advice that gave rise to the document?

**Mr Smith**—To the authority for the document. This is a government document.

**CHAIR**—By drawing attention to the fact that it is authorised by the Treasurer, something that is obvious from the—

**Mr Smith**—It is a formality, and there it is. It is a very important formality, isn't it, that the government is responsible for its publications?

**CHAIR**—Yes, but is the document that we have and that people got through the mail in every letterbox the same as the advice you gave the Treasurer?

**Mr Smith**—You know from long experience, Senator, that our advice and government publications and policies are matters that we do not comment on. We are, by your own instructions to us that I received in the mail on Monday, not asked to provide comment on government policy.

**Senator CONROY**—Coming back to Dr Henry's claim that he is responsible for the decision to produce cameos that purport to represent Australia's position in the first year, but use the second year inflation figure—

**Mr Smith**—I want to go to that point as well, because I said that I had two points to make. One was the formality point. I think it is important that everyone understands these things.

**Senator CONROY**—Absolutely.

**Mr Smith**—The second thing is that I think we are confusing two types of modelling here. The cameos refer to the impact of social security benefits, income tax cuts and the price effects of the indirect tax package whereas you were referring earlier, in bringing this matter forward, to potential impacts on particular industries.

**Senator CONROY**—I have moved on from that, if that makes it any clearer for you. I was not referring to that anymore.

**Mr Smith**—It seems to me that they are completely different issues.

**Senator CONROY**—Yes, I know. I have left that behind and I have moved on to a different issue. Australians received something in the mail that purported to represent to them their position in the 12 months after the package comes into effect.

**Mr Smith**—No. The document says that those cameos refer to the second year, not the first. It says the second year.

**Senator CONROY**—That is probably something most people would be unaware of.

**Mr Smith**—I cannot comment on that.

**Senator CONROY**—I have not got a copy of the one that was posted as opposed to this one, but I am not sure that the one that appeared in people's letterboxes had the disclaimer that you are suggesting up front. Earlier Dr Henry suggested it would be easy enough to calculate what the impact would be in the first year. Dr Henry, do you remember that?

**Dr Henry**—Yes.

**Senator CONROY**—You suggested that you were not aware of any great interest and I suggested that I was very interested. Does Treasury have those first-year figures available? Did they do the calculations on the first-year inflation effect on those same cameos?

**Mr Smith**—I have no idea whether they were done, but I am not aware of them being done.

**Senator CONROY**—Is it possible to get them done?

**Mr Smith**—I will take it on notice, if that is a request.

**Senator CONROY**—I have just done a quick calculation. Appreciating that it is a back of the envelope type of thing, looking at one of the cameos on page 199 for the single aged pensioner, the cost of living adjustment increases when the net value of the package falls. If you are looking at using the 2.5 per cent rather than the 1.9 per cent, the change you get is a 40 per cent reduction in the net benefit. As I said, that is very back of the envelope. You said it would be a relatively simple arithmetic thing to calculate, Dr Henry. Would that be a fair calculation from page 199?

**Dr Henry**—It is a little more complex than that, Senator. There is another issue for pensioners in that the government is saying that, whatever happens to the CPI, they are guaranteed the 1½ per cent real increase in the pension. So, if the CPI increased by four per cent, they would be guaranteed 1½ per cent on top of the four per cent. There is a guaranteed 1½ per cent—real—in there for pensioners.

**Senator CONROY**—I appreciate the point you have made. I happened to pick just one of the cameos and you are saying that that is slightly separate from the rest of the cameos. I accept that, given the condition you have just put. But, in terms of the rest of the cameos, would you accept that the real position of people in that first year would have to be slightly less in terms of the increase in their net benefit than that which had been published and circulated, given that 2.5 per cent is greater than 1.9 per cent? I am not missing anything, am I?

**Dr Henry**—At the risk of confusing things even more, as you noted at the beginning of this series of questions, all of the CPI effects are eventual effects. The 2.5 per cent itself is an eventual effect—that is, an estimate of what would be the eventual impact on the CPI of the package which would be implemented in year 1. The 1.9 per cent figure is an estimate of what would be the eventual impact on the CPI of the package as it looks in year 2 and so on. I would not want to be held to whether the CPI impact on day 1 in July 2000 would be 2.5 per cent.

As I said earlier, international evidence is that most of the price effects feed through within 12 months. That would suggest that you would get to the 2.5 per cent figure at some time within the 12-month period before the next lot of changes come in on 1 July 2000 and shock the CPI system unambiguously down. There is no question that that is an unambiguous reduction from 1 July 2000. Then it might take some time for that to flow through as well.

I have a little difficulty with your questions about instantaneous impacts and overnight impacts. However, certainly the CPI impact in year 1 is likely to be higher than in year 2. That is what we have said. The difference between the two is of the order of half a percentage point or a little more. If you want to make judgments about a year 1 impact versus a year 2 impact, then on the basis of that difference, as I think I indicated, it is an arithmetic exercise.

**Senator CONROY**—I will now move on to some of your inflation assumptions.

**Senator MURRAY**—Before you do that, I think it is important to recognise that the price impacts are most rapid where the stock turn is fastest relative to those goods. For example, wine stocks at the production end turn about 1½ times a year. At the retail end, they turn about eight times a year. So the price effect comes through faster on the retail side than on the production side. I think that, depending on the type of good consumed, the price effect will be earlier. It is probably relevant to your quintiles—that is, the price of goods concerned—where the inflation impact is fastest. I am not giving you an answer; I am merely suggesting, to flesh out your answer, that it is extremely difficult, given the nature of how a basket of goods is made up, to assess it. We should really concentrate on those areas of consumable goods which will impact most on the community as a whole—probably fuel, rent, clothing, food and those big ones, if I may suggest.

**Dr Henry**—Yes. Whilst agreeing with that, the only comment I would add is that there are provisions in the package to refund wholesale sales tax on stock in hand.

**Senator MURRAY**—Yes.

**Senator CONROY**—I now want to move on to the inflation assumptions. You took the tobacco effect out. What was the percentage figure?

**Mr Smith**—It was 0.3 per cent, Senator. We have given you a letter today which gives you those figures.

**Senator CONROY**—Okay. The House of Representatives Standing Committee on Economics, Finance and Public Administration heard evidence on Tuesday from the Governor of the Reserve Bank that he was not confident that the pass through would be quite as quick as perhaps you thought. I am interested to hear your opinion. I will read you his quote so that you can comment on it. Mr Macfarlane was asked about it being passed on in full. He said:

That is a reasonable assumption on which to base any changes in taxes, but I do not know the timing. It could well be that, with some of these things, competition takes a little bit longer to winkle out the pass-through than is assumed.

You do not think that that is inconsistent with anything that is in the package?

**Dr Henry**—No, I do not believe so.

**CHAIR**—You are assuming that it is passed through 100 per cent and immediately?

**Dr Henry**—No. I indicated that international evidence of which we are aware says that most of the price effects occur within the first 12 months following the change.

**Senator SHERRY**—Was that most of the price increases as a result of a GST or what was passed through?

**Dr Henry**—The price effects.

**Senator SHERRY**—Page 160 of the overview says:

For example, it is assumed that the abolition of the wholesale sales tax would be passed through fully to consumers in the form of lower prices.

Do you think that is a realistic scenario?

**Dr Henry**—Yes, I do.

**Senator SHERRY**—All prices are going to be reduced with the removal of wholesale sales tax and all the other state taxes that are abolished. Do you think anybody is going to take advantage of the situation and try to maximise their profit?

**Dr Henry**—I think it is a reasonable assumption that those price reductions will be passed on in full, just as I think it is a reasonable assumption that the price increases of the GST will be passed on in full. I do not, for example, think it is a reasonable assumption, as I have heard some people suggest, that the price reductions will not be passed on but the price increases will. That seems to me to be rather unreasonable.

**CHAIR**—It seems, though, that Mr Macfarlane has a different view about how reasonable it is for the price reductions to be passed on in full.

**Dr Henry**—That is not how I understood his remarks. I understood his remarks to go to the timing of the passing through of the price reductions.

**CHAIR**—I understand that they go to timing too.

**Senator MURRAY**—Price increases will come on pretty quickly but price reductions will be delayed.

**Senator CONROY**—Have you ever visited a bank and watched how fast the interest rate goes up after the Reserve Bank announces a change but how slow it is to come down?

**Dr Henry**—I understand the point.

**Senator SHERRY**—Will you guarantee that, Dr Henry? This is a very firm statement—‘passed through fully to consumers’.

**Dr Henry**—I do not understand the point of my making a guarantee.

**Senator SHERRY**—It seems to me that this is not real world. There are going to be some people who will try to take advantage and not pass on the price reductions.

**Dr Henry**—That may be the case but, at the same time, one could argue that there are other businesses that will not be able to pass on the price increase due to the GST when they are made subject to the GST. One can make those arguments. All I am suggesting is that, if you wish to make those arguments, there is a case for some symmetry in them. As a pretty good working assumption, I think it is acceptable to assume that there is symmetry.

**Senator CONROY**—Prices have always been sticky down. It is like wages: wages do not fall dramatically either.

**Dr Henry**—But in a lot of industries it is not a question of taxes being removed or taxes being applied. In a lot of these industries what is happening is that one tax is being replaced by another. Is the suggestion being made that a business currently selling a product which is subject to wholesale sales tax will pocket the abolition of the wholesale sales tax and will then turn around and increase the price fully by the amount of the GST? I find that very unlikely.

**Senator SHERRY**—You do not find it likely that, in part at least, some of the reduction in wholesale sales tax will be taken as profit?

**Dr Henry**—I am not saying that that will not happen. I do not find it likely. I am not saying that it will not happen. But I am also making the point that, if you accept that that can happen, presumably you would also accept that, were there an increase in wholesale sales tax rates, it would not be fully passed on in prices either and that that would have some adverse impact on profitability and that, by implication, the imposition of a GST would also have some adverse impact on profitability and would not be fully passed forward in those cases. I am suggesting that it is not as simple as deciding that, for some reason, reductions in wholesale sales tax are not going to be passed on fully but increases in the GST will.

**Mr Smith**—There seem to be two points here. Firstly, will it happen? Secondly, could it happen? The answer is that the government itself has anticipated that there may be some attempt to do this. For that reason, it has legislated against price exploitation associated with the tax package. That legislation has been introduced to the House of Representatives and it is backed up with a \$27 million budget to undertake the monitoring and other activities by the ACCC that is associated with that. I just wanted, for completeness, to make that observation. What Dr Henry is observing is that, in addition to anything on the one side, there is always a risk that there is also an amount on the other side. For forecasting reasons, we have made a symmetrical set of assumptions.

**Dr Henry**—I add to that that if you accept, as we do, that the incidence assumption should be symmetrical then the assumption of a 100 per cent pass through actually maximises the CPI impact—it provides the upper band. A 50 per cent pass through assumption would give you half the CPI effect, for example.

**Senator MURRAY**—If that is so then I would assume that, of your 107 industry groups, some would be less competitive in the marketplace and some more. I think the real issue is when it flows through the time series. I would assume that, for those industry groups which are less competitive, the flow through would be slower and that, for those which are most competitive, the flow through would be faster. One of the big issues is when it hits. I would think that that would be very difficult for you to arrive at.

**Dr Henry**—Without disagreeing with your point at all, I would not even attempt that modelling. PRISMOD is a comparative static model in the sense that I described earlier: a snapshot of the world as it is now and of what you think it will be after all the adjustments have settled down. Trying to introduce differential rates of pass through is something that is certainly a challenging exercise, but I would not attempt it.

**Mr Smith**—If I can add to that, I do not think that it is necessarily the case that the most competitive industries would pass through most quickly. In some cases the most competitive industries may find it difficult to pass through increases. It is a minor point, but I wanted to say that I do not think even that proposition that you put would necessarily always hold.

**Senator FERGUSON**—The question also is: what is going to be different about the setting of market prices after the introduction of a GST compared with the situation today? In the less competitive industries, who knows whether or not there is not a greater profit margin anyway. My understanding is that the marketplace would set the price and that, in competitive industries, competition would be the same after the introduction of a GST as it was under the existing wholesale sales tax structure.

**CHAIR**—In my experience prices rise, they rarely fall; but I look forward to the event if the parliament has its way in endorsing the legislation we are looking at.

Can I take you quickly back to an answer that I thought both Dr Henry and Mr Smith gave us in unison but which has defied me. When we were talking about first-year effects and second-year effects, my understanding is that you said it was set out in here and that it was modelled on the second-year effects. If you have to take this on notice, please do. Could you point out where that is explicitly stated in the document?

**Mr Smith**—In the first sentence on page 162 under the heading, ‘How was the increase in cost of living calculated?’, in relation to 2001 and 2002.

**CHAIR**—It does not say that there would be a 2.5 per cent first-year effect there though, does it?

**Mr Smith**—The reference to the half is somewhere else.

**CHAIR**—I ask out of interest from the point of view of a plain person being able to pick this up and understand it.

**Dr Henry**—On page 56, where the CPI is first explained.

**CHAIR**—Is it under the heading ‘Increasing pensions and benefits’ in the second paragraph?

**Dr Henry**—That is correct.

**CHAIR**—It is referred to as ‘perhaps as much as half a percentage point’. We are now talking about 2.5 per cent, are we not?

**Dr Henry**—Yes.

**CHAIR**—Is this the first time we have actually uttered out loud that figure, rather than keep it to ‘perhaps as much as half a percentage point’ on 1.9 per cent?

**Mr Smith**—I have no idea whether or not these figures have been uttered elsewhere, but the figure I have given you today is in the letter I have given you today.

**Mr Tune**—The four per cent and the 1½ per cent make it reasonably clear that it is 2.5 per cent. There is the four per cent increase in pensions and allowances, ensuring the 1½ per cent real increase. Four minus 1.5 equals 2.5. So it is reasonably clear from that piece of arithmetic that it is 2.5 per cent. Certainly the calculations were done on that basis.

**CHAIR**—All I have to say, Mr Tune, is that it is not reasonably clear to me as an ordinary person that what we are talking about here are the second-year effects of the cameos based on 1.9 per cent. I accept what the Treasury officers have said—that the first-year effect is set out here. When we dig, so it is. But it was not entirely clear or obvious to me that that was the case when I read the document in the first place. That is all I am saying.

**Senator CONROY**—I have a question on the letter that has just been tabled. Could you tell me the rationale behind the answer to question 4, which says, ‘Allowing the states to continue applying stamp duties on business conveyances raises the CPI by 0.1 per cent’?

**Mr Smith**—Essentially, you know that the CPI was estimated taking account of both new taxes and the abolition of various taxes. This response is to a question from Senator Cook.

**Senator CONROY**—Is this one of the 10 taxes that was going to contribute to the fall?

**Mr Smith**—It is actually just a component. We still expect to see a reduction in state taxes of the amount that was in the package, but the definition has narrowed in order to achieve that result as a result of new data obtained from the states. So this ultimately derives from that adjustment. Senator Cook asked the question, ‘What is the CPI effect of that adjustment?’ It is a timing adjustment because it is a deferral.

**Senator CONROY**—I wanted to move on to some of the employment effects of the GST. Murphy, in the material that you supplied to us, produces a table replacing WST with a realistic VAT. The summary appears in table 9 on page 17. It makes interesting reading. Of the 18 industry groups which are listed, only five record increased employment. Of those five, two are only looking at increases of 0.1 per cent. So 13 of the 18 suffer employment losses. Would you like to comment on that?

**Mr Smith**—The principal comment I would make about this is that it is a specific piece of analysis, and not of the government's package. You understand that this was done in April or whatever and it looks little like the actual package announced by the government. In particular, there are no fiscal benefits.

**CHAIR**—It is part of your submission to this inquiry, however.

**Mr Smith**—We felt that we should release this because it was the piece of modelling you asked for and it was the one that we had. But, in giving it to you, it is not purported to be an estimate of the effect of the government's package.

**Senator SHERRY**—But what it does show is that, in 13 of the employment sectors, the GST leads to a decrease in employment across a wide range of industry sectors.

**Mr Smith**—That is what that particular model shows, yes.

**Senator CONROY**—But you do not have any other model.

**Mr Smith**—We are not expecting a negative employment effect from the government's package.

**Senator SHERRY**—But, as a consequence of the GST, there is going to be a decline in employment across a whole range of industry sectors and no growth in employment.

**Mr Smith**—No growth of employment?

**Senator SHERRY**—As a consequence of a GST. According to this table, there will be no total growth.

**Dr Henry**—Sorry, no total growth in employment. I would need to check, but I think it is just an assumption of the model that total employment is fixed. The total stock of employment is given economy wide. Therefore, if there is an increase in employment in one sector such as, for example, mining, there must be a reduction in employment in another sector. Again, it is another bit of arithmetic.

**CHAIR**—There are 18 categories here. Thirteen of them show job losses for Australians. According to this table, there are job losses for Australians in agriculture, forestry and fishing. There are job losses for Australians in the electricity, gas and water industries; in the retail trades; in accommodation, cafes and restaurants; in the transport sector; in the communication services sector; and in the finance and insurance sector. There are also job losses for Australians in government administration and defence, in the education sector, in

the health and community services sector, in cultural and recreational services, and in personal and other services. That is 13 of the 18 categories you have given us. Overall, according to my calculations, that is a net negative of 9.6 and an average of 0.6 net job loss in aggregate on this table. The populations in each of those categories vary.

**Dr Henry**—That is the point.

**CHAIR**—But the job gains are in mining; it is 4.7. If I recall—I am going on memory—the mining sector, a hugely capital intensive sector, employs about three or four per cent of the total work force.

**Senator MURRAY**—It is about 80,000.

**CHAIR**—They have a job gain. But the retail trade, which is a big employer, has a job loss. So someone who goes out of work in the retail industry can get a job in the mining sector? Is that what we are talking about in terms of the swings and roundabouts outcome?

**Dr Henry**—The model assumes that aggregate employment does not change; that is an assumption of the model.

**CHAIR**—This is one of those reasonable assumptions that the model is based on? First, assume no job loss?

**Dr Henry**—Or job gain.

**CHAIR**—Or job gain.

**Dr Henry**—Yes. The consequence here is higher real wages. What actually happens in this model is higher real wages. That is how the benefits flow through. The alternative closure assumption would be to allow employment gains in aggregate. But, on this model simulation, Murphy has held aggregate employment unchanged. The consequence is higher real wages. The composition of employment is what is shown in that table, but that is all that is shown. It would be a little risky to infer from that table that these are projections of actual changes in employment, if one allows for an employment gain.

**Senator CONROY**—But you are happy to take a GDP growth figure of two per cent out of it?

**Dr Henry**—I suspect that the GDP figure would not be particularly sensitive to this. If anything, maybe you could get a higher rate of GDP growth if you had a different closure assumption.

**Mr Smith**—This is again an example where there has been a slight leap, which I do not want people to make. We have not adopted a two per cent GDP growth assumption. It is presented here, as are all these other figures, as a modelling result not of the government's tax package. We said before that these and many others are used to obtain indicative ideas about qualitative things. But we have not made these point estimate quantitative claims.

**CHAIR**—I wonder why that is. I asked the parliamentary library today to put against each of these categories the number of Australians employed in them and then work out, given the plus and minus signs as to job gains and job losses, what the outcome would be. I came to a conclusion that near enough to 14,000 Australians will lose their jobs under this model.

**Dr Henry**—I suspect that that is rounding. They should have got zero.

**CHAIR**—It is rounding. It was 13,800 according to my calculations.

**Dr Henry**—It should be zero. That is the assumption of the model.

**Mr Smith**—That 14,000 is a tiny percentage of the total work force. I am sure that a lot of rounding was done to get a result like that.

**CHAIR**—But 81 per cent of the Australian work force is employed in the services sector. The job gains are notoriously in mining and manufacturing, according to this. They are the parts of the Australian work force that are the most capital intensive, not the most labour intensive. There might be gains in those sectors, even spectacular ones. There is 4.7 for mining and 2.1 for manufacturing. However, there are spectacular losses in other areas which are quite labour intensive too.

**Mr Smith**—Wholesale trade is a big industry, and it has a large gain. That is no doubt why you got a figure very close to zero.

**Senator SHERRY**—If you work in the hospitality industry, there are going to be job losses of 9,000. If you are an unemployed waitress, presumably you will go and work down a mine somewhere or on top of a woodchip pile, where there will be another gain.

**Mr Smith**—I am taking that as a comment and not as something you are asking me.

**Senator FERGUSON**—I question the process here. We had an agreement on the allocation of time. I know that we are due to finish this segment at 3 o'clock. I understand that coalition senators have only used 30 minutes of the four hours that have been allocated so far. We did say that we would cede the excess of our time to both Senator Murray and Senator Harradine. As there are only 25 minutes left, Senator Murray will be caught short, unless he gets the opportunity pretty soon to ask some questions.

**CHAIR**—Senator Murray will not be caught short. I intend to see that Senator Murray will not be caught short.

**Senator FERGUSON**—Does that mean that Treasury will be going on after 3 o'clock?

**CHAIR**—I do not know what it means. If we press on, everyone will get properly treated.

**Senator FERGUSON**—I ask you to check the allocation of time. I think that opposition members have had about 60 per cent of the time in which questions have been asked so far.

**CHAIR**—You did say to me that the government members of this committee would cede the time that Senator Harradine and Senator Murray wished to take.

**Senator FERGUSON**—We will cede our time to them. We have had only 30 minutes of the time since 9 o'clock.

**CHAIR**—I think you will find that you have had more than that.

**Senator FERGUSON**—I just added it up.

**CHAIR**—I think you will find that you have had more than that.

**Senator FERGUSON**—I would like to think that, if we are going to finish at 3 o'clock, Senator Murray will have the opportunity, and Senator Harradine if he wishes, to ask more questions.

**CHAIR**—The quicker we get on with it, the more time there will be.

**Senator MURRAY**—I appreciate the concern for our needs.

**Senator CONROY**—I want to ask a quick question. Your submission, not the attachment, states that the level of economic growth expected from the tax package by 2002-2003 is 0.5 per cent of GDP. That is a cumulative figure, is it not?

**Mr Smith**—It is a cumulative figure.

**Senator CONROY**—It is not each year? It is half a per cent greater than it otherwise would have been?

**Mr Smith**—It is cumulative after three years.

**Senator CONROY**—You may want to take this on notice. What is the estimate of the separate amount of growth which is attributable to the replacement of the WST with the GST?

**Mr Smith**—The estimates we have made are for the package as a whole. I do not know whether I could give you a figure that seeks to break it up. As I said before, we included this figure by way of a global assumption, not as a result of specific modelling. I would be surprised if it were appropriate for us to break it up into specific components.

**Senator SHERRY**—I have one other comment that you might like to respond to. I will conclude on the employment figures. Why were these sorts of employment outcomes not made public in the tax reform package? As a consequence of a GST there will be significant shifts in employment—swings and roundabouts. I am sure that Australians would have been interested to know whether they work in a sector where there is going to be job losses. Does any press release or statement by either the Treasurer or the Prime Minister point out the downside to the introduction of a GST in terms of the employment losses?

**Mr Smith**—The only comment I can make is that these are not our estimates of the sectorial employment effects of the GST.

**Senator CONROY**—But you have done no modelling on it.

**Senator SHERRY**—It is in the evidence that you have presented to this committee. You provided us with this document outlining the employment losses in these 13 industry sectors. You provided it to us.

**Mr Smith**—I did not provide you with an official estimate of the employment losses of any sector.

**Senator SHERRY**—It is in the document you have provided to us as evidence.

**Mr Smith**—It is extremely important that when we provide information the public record records what it is that we provided. It is as described. It is a piece of modelling, done before the government's package was announced or decided, of a particular indirect tax change with certain assumptions between the allocation of gains to wage rates and employment. That is what it is. We can present, no doubt very shortly—I gather it was released yesterday—another macro model result which shows net employment gains, as reported to me, of 190,000 from the government's tax package. That is from Access Economics.

**Senator SHERRY**—I will conclude on this point. This document shows that a goods and services tax reduces employment significantly across 13 industry sectors in this country.

**Mr Smith**—I do not think I can add to my answer. I have made it clear. They are not the official estimates.

**Senator MURRAY**—I will return to the Labor senators' focus on the pass-through effect of the prices. Prices in this discussion are relevant because of the compensation configuration. I happen to agree with them. I do not know whether I am using the jargon correctly, but I think there will be stickiness in the prices coming through, although I recognise the intellectual integrity of what you were saying. If you make an assumption one way, you therefore have to make the assumption the other way and it will even out. Therefore, the real effect could be a time effect, not an impact effect.

Within the passing through or not of price reductions, the wholesale sales tax is about \$18 billion at present. Other state indirect taxes are—I cannot recall exactly—\$6 or \$7 billion or of that order. From my experience and just thinking practically, it seems that a business would quite easily understand and react to a 22 per cent reduction in wholesale sales tax from day one and a 10 per cent increase in GST and be able to adjust its prices accordingly.

It might have much more difficulty, because it is lost in its pricing configurations, with the impact of dropping stamp duties, FID or BAD and those sorts of things. Yet that amounts to one-third of the indirect tax reduction. Would you expect with regard to that one-third that it would be far too difficult to assume an automatic pass-through or a longer time frame in which it eventually works through than the dropping of wholesale sales tax, which

is more easy for businesses to compute? If your answer is yes, is there a CPI effect as a result of that longer time frame or greater stickiness?

**Dr Henry**—I understand the thinking behind the question. The impact of the abolition of financial institutions duty, debits tax, stamp duties and so on is very much a second-round or third-round impact. It is not a direct impact in any event. Part of the impact of the removal of wholesale sales tax is of that same character. For example, wholesale sales tax that is payable on plant and equipment purchased by businesses—capital input—would presumably be amortised over time. Nevertheless, the assumption, which is a necessary part of the methodology we have used, is that those things all happen at the same time. In any event, we only get one number out at the end with no particular time attaching to it. So the direct and indirect impacts are all rolled in together, and we just get one number out at the end.

There is a case, I think, for believing that the direct impacts would occur before the indirect impacts. I would not be able to put a precise time on the gap between the two, the direct and the indirect impacts. I do not think I could really add more to what I said earlier, that the studies or the experience of other countries of which we are aware has been that, in general, these direct and indirect impacts are felt within the first 12 months. So there could be a difference in timing there, but I really would not be able to indicate to you precisely what that gap might be.

**Senator MURRAY**—That is an important answer because I deduced from the questioning of Senators Cook and Conroy that they expected the negative price impacts to be short term and the positive price reductions to be medium to long term. If that is over a longer time frame than 12 months, it materially affects the consideration of your modelling. If it is within 12 months, then we are left with the ‘2.5 per cent, 1.9 per cent’ scenario. I will leave it at that. You understand the problem we are faced with.

**Dr Henry**—Yes.

**Senator MURRAY**—I want to draw you to the Murphy report as well, if I could, and just pick out one element. There are a number of interesting elements in there, but this really goes to the consequence of items being GST free or not and whether that merely affects revenue or has wider economic effects. I understand that the two are always linked because they have to be. You have it before you, haven’t you?

**Dr Henry**—Yes, we have.

**Senator MURRAY**—If you turn to scenario 2.1 in the Murphy report, he has there what he refers to as a realistic VAT, and in the middle of that first page he refers to the effect on general essential spending as being a positive 0.1 per cent. Also, within scenario 2.2 he refers to a welfare gain, I think, overall of \$1 billion; a positive GDP gain of two per cent, which we have discussed; and a positive business investment appraisal.

If you turn to scenarios 18.1 and 2—which he has been kind enough not to refer to as unrealistic VAT but simply as a non-food VAT—he indicates there that the economic benefits are precisely the same as with a GST which includes food. He says that the overall welfare gain is \$1 billion; GDP is 1.9 per cent as opposed to two per cent; business

investment is 1.9 per cent as opposed to 1.8 per cent. In other words, the economic impact of exempting food is relatively meaningless within his model, but the revenue impact is obviously considerable.

Would you concede or agree that that is a correct reading of the Murphy model? Also, would you indicate to me whether, if you did the same modelling, you would be likely to arrive at the same conclusion—namely, that the exempting or not of food is primarily a revenue issue, not an economic issue?

**Dr Henry**—I would really, if you do not mind, want to think longer and harder about that and reflect more on the Murphy modelling. Certainly, the issue of food is very much a revenue issue. It is also a compliance cost issue, and the Murphy modelling does not attempt to estimate the economic impacts of the higher compliance costs that would be associated with not taxing food. But whether and how the precise closure rules of this modelling affect the results for both GDP and employment and, indeed, the welfare gains I would want to think harder about before coming to an assessment of the impact of excluding food from the base.

**Senator MURRAY**—Yes, because, when the committee considers modelling appraisals which focus on what should or should not be within a GST, I think it important that we understand the consequence of that decision. I concede that there is a revenue and compliance consequence. But I was intrigued to see that there was not an economic consequence, and I appreciate your comment in due course.

Before I leave that line of questioning, I would draw your attention to the very last page of that submission, table 8, numbered A317. This shows the long run general effects of replacing wholesale sales tax with differently designed VATs. Along the lines of the realistic VAT and non-food VAT, reading horizontally, the welfare gain is a section at the end there. Their realistic VAT—in other words, which includes food—indicates the welfare gain in dollars per year for the 50 per cent of the population who are below the mean consumption, being the poorer, as opposed to the 150 per cent above the mean of 100, therefore being the richer; under their realistic VAT configuration, the welfare gain is 94 versus 14. Under a non-food VAT configuration, the welfare leap is substantial for the lower group—they move up from 14 to 37; and the upper group move down from 94 to 74 in terms of a welfare kick-in.

I would like you to consider whether the excision of food in modelling, in your view, in your modelling terms, would deliver an equivalent welfare gain to the lower group. Alternatively, do you have difficulties with the way in which this is expressed?

**Dr Henry**—Just a point of clarification—and obviously we will have to take that on notice: are you looking for an assessment which takes account of the lower value of compensation that would be payable, given the revenue—

**Senator MURRAY**—I want to know from you whether you take issue with the broad conclusion of the Murphy model: that there is a very substantial lift in the welfare gain to lower income people—very substantial; in fact, it is nearly three times—by removing food from a GST. You may take issue, based on your own modelling. I just want to know

whether, in your view, this has validity and integrity as an assumption, because it is a fairly critical point.

**Dr Henry**—We will have to take it on notice.

**Senator GIBSON**—But family allowances and income tax cuts are not taken into account in those projections, and they must be.

**Senator MURRAY**—That is why I want to have a full response; I would appreciate a full response. Mr Chairman, these witnesses only have five minutes left, and Senator Harradine may wish to go on. I have other questions and I will put them on notice, if that is acceptable.

**CHAIR**—Senator Harradine, do you have any questions?

**Senator HARRADINE**—Just on that point: am I to assume that this package relies heavily on the operation of a welfare state?

**Dr Henry**—Do you mean for the delivery of compensation?

**Senator HARRADINE**—Yes.

**Dr Henry**—Compensation is delivered through income tax cuts.

**Senator HARRADINE**—Yes, I understand that.

**Dr Henry**—But also very much through very large increases in family payments, very substantial increases in the family payments part.

**Senator HARRADINE**—And pensions and what have you?

**Dr Henry**—And pensions and allowances.

**Mr Smith**—The family aspect, of course, reflected in the decision to establish as part of the package a families assistance office as well.

**Senator HARRADINE**—I just raise the matter because I find it interesting that the operation of this new tax relies heavily on the expansion of the welfare state.

**Mr Tune**—It might be worth adding that, in terms of family assistance, the delivery of that can be either through the tax system or through—

**Senator HARRADINE**—I heard what Mr Smith said, but I was just asking you the question following Senator Murray's question to you.

**CHAIR**—Senator Ferguson?

**Senator FERGUSON**—I listened intently when Senator Sherry was questioning about job losses or potential job losses, and you were talking about a rounding down; you said it had a zero impact. He—and I think I am quoting correctly—said, ‘The effect of a GST is to cause job losses.’ But it would not be fair in the context of the whole tax package to look at the effect of a GST in isolation without the effect of the other reforms in the whole package of tax reform; is it a fair assumption to make that you should not look at the GST in isolation?

**Dr Henry**—It most definitely is. But, even considering the GST, because it is an assumption of the model that in aggregate employment it is fixed, you could equally say—that is, with as much validity—that the reason for the job losses in one industry is the boost to employment from the GST in other industries. I just do not think it tells you a lot in terms of the impact on aggregate employment of the GST; in fact, it tells you nothing about the impact on aggregate employment of the GST, nor does it tell you much about the impact of the overall package in any particular industry.

**Senator FERGUSON**—I only say that because the title of the committee is the inquiry into our new tax system, and to treat the GST as though it is the only part of the new tax system can give a distorted view. I have no further questions.

**CHAIR**—I think it just proves that you can have tax reform without a GST. Senator Gibson, do you have any questions?

**Senator GIBSON**—No, Mr Chairman.

**CHAIR**—Senator Murray, the call is back to you for a few more minutes.

**Senator MURRAY**—Thank you. The CPI is absolutely germane to this discussion, again, because of the economic and compensation consequences. The CPI has been given great credibility by you because you have used it in contradistinction in the national accounts to, for instance, the household expenditure survey; you have indicated that you put much more weight, if you like, on the empirical and statistical validity of the CPI package. The CPI, as I understand it, is still an eight-capital-city average based on employee households, with the unemployed or retirees being left out of that. Is that correct

**Dr Henry**—Yes, I detailed that on a number of occasions this morning. That is, it relates to employee households: households whose principal source of income is wages and salaries; they live in capital cities; and they are not in either the top 10 per cent of households by income or the bottom 10 per cent of households by income. So it is that subgroup.

**Senator MURRAY**—So it means that HES picks up a number of household categories which are not picked up by the CPI area.

**Dr Henry**—Quite correct.

**Senator MURRAY**—The other point I want to pick up on is: if the CPI is based on the eight-capital-city approach—and this may be an unfair question to you because it is almost

an ABS question—is it made a lot weaker by the inference, therefore, that it disregards regional and rural Australia?

**Dr Henry**—I think it probably is a question that should go to the ABS.

**Senator MURRAY**—But it would worry you, would it not, as a modeller, having to assume a CPI which is urban based, not rural and regional based?

**Dr Henry**—The question for us, given the work that we were doing, is whether you are going to get a more reliable estimate than what you would get from using the alternative data which are available, and the alternative data are those which are found in the household expenditure survey.

**Senator MURRAY**—If I am right, the data on those 8,700 households includes rural and regional Australia.

**Dr Henry**—Yes, it does include some households from rural and regional Australia.

**Senator MURRAY**—So that is another sector which it covers.

**Dr Henry**—But, as I indicated this morning, there are two populations that we can actually compare—that is, the CPI on the one hand and, on the other hand, the CPI households, the employee households, capital cities and so on in the household expenditure survey. It is the only case in which we can make a direct comparison between two data sets. What we find is that, even in that case, the household expenditure survey—

**Senator MURRAY**—Has weaknesses.

**Dr Henry**—It is very different from the CPI. You cannot accept both. Intellectually, you cannot accept both data sets. You have to either accept that the CPI is an accurate representation for those households or you have to accept that the household expenditure survey is an accurate representation for those households—and that the ABS and all of us are wasting our time with the CPI. If you conclude that the household expenditure survey does not provide reliable information with respect to those households—and that is the interpretation I would put on it—then you are bound to place the same interpretation on the household expenditure survey information relating to regional and rural households.

**Senator MURRAY**—Then we arrive at a situation where the CPI we have is urban based and excludes non-employee households and rural and regional Australia. I assume, therefore, that it only covers a percentage of the Australian population.

**Dr Henry**—That is correct.

**Senator MURRAY**—Do you have an idea of how big that percentage is on a capital city basis?

**Dr Henry**—I do not, off the top of my head.

**Senator MURRAY**—Would it be as low as 30 per cent?

**Dr Henry**—It could well be.

**Senator MURRAY**—Let me give you a couple of my own assumptions. Arising from what you have said to me and what I have just teased out in this discussion and set of questions, my assumption is that any CPI assessment out of the modelling would be an underestimate. My assumption is that CPI impacts are likely to be greater with non-employee households and rural and regional Australia. That would inch your CPI estimates up. What I do not know is by how much. Would you be able to comment on that assumption?

**Dr Henry**—Yes, I will comment on that. I am not sure what is lying behind that judgment, but—

**Senator MURRAY**—I will give you an answer quickly. Let us just talk about simple matters like transport, the price of food and drink in country areas and the price of services—not postal services, because they are cross-subsidised, but electricity and water. There are many areas of expenditure in the rural and regional area which anecdotal—never mind empirical—evidence indicates are much more expensive than in urban areas. That is why I assume that the CPI impact is greater in those areas.

**Dr Henry**—They are more important in those areas, but road transport costs are coming down very substantially as a result of this package—very substantially. It is one of the big winners, if you like, in terms of cost reductions, and that is largely due, of course, to what is happening to diesel excise. That is one of the reasons why, in terms of change, rural and regional Australia should actually do very well out of this package.

If one does look at the household expenditure survey data and seeks evidence—I would discount the evidence, of course, given my views about the quality of the data, but that is one body of evidence—one should ask the question: does that data set provide any evidence in support of your proposition? And the answer is: no, it does not. You can detect a difference between particular types of households, but the factors that you have referred to do not appear to be significant.

**CHAIR**—Thank you, Mr Greg Smith, Dr Ken Henry and the other officers of Treasury and the department of taxation.

**Senator MURRAY**—Especially those who returned from leave.

**CHAIR**—Yes, and a special commemoration of those who returned from leave. We will be inviting you back before we report, I think, on our first tranche of references. I trust you will be able to balance the demands of the department against our requests for information and meet your demands while providing us with that information. But, for now, thank you very much.

**Proceedings suspended from 3.05 p.m. to 3.16 p.m.**

**WARREN, Associate Professor Neil Alastair, Lecturer, ATAX, University of New South Wales**

**CHAIR**—Thank you, Professor Warren, for making your time available. I appreciate that we have called upon your services and that of your agency at short notice for major work and that you have come through and provided us with a paper. We acknowledge that that has taken a big effort and we thank you for it. Is it the wish of the committee that we give privilege to Professor Warren's paper and release it to the public? There being no objection, it is so ordered. With those remarks, Professor Warren, it is over to you.

**Prof. Warren**—I thought I might begin today with basically a bit of an overview of the paper and, if you like, a walk through of how you go about developing these kinds of models. You first distinguish what it is not. Here I am going to refer to four types of models, which we call microsimulation models.

It is worth making a distinction that there are basically two general categories of models. There are the macro models, and you have heard today about the Murphy model; Treasury has a TRYM model, there is the Monash model and so on. So there are a number of these macro models and they can be a combination generally of two or three models. No doubt Colin Hargreaves can say more on that tomorrow because he has edited quite a good book backgrounding the six main macro models. There is a very, very brief appendix to the paper outlining the basic elements of those models.

What I want to concentrate on—and where I think a lot of the attention is—are the models which are used to undertake distributional impact analyses, and they are what are called microsimulation models. A microsimulation model is micro as distinct from macro because it is looking at a particular aspect of the macro economy. In this case, it is looking at the household sector.

There are a number of these models. There are what we refer to in the paper as STINMOD-STATAX. STINMOD is a model of the income tax and social welfare system developed by NATSEM, the National Centre for Social and Economic Modelling. STATAX is a model very similar conceptually to PRISMOD, with its own differences. It models the indirect tax system. Before I go into the detail of how you build these models, other models like this are PRISMOD, which you would have heard Treasury talking about this afternoon and presumably this morning, though I was not here this morning. The Melbourne University group have built on Andrew Chisholm's model. They use it for distributional analysis and have to some extent integrated it into the ORANI model.

Just as an aside, there also is an ABS model, but it really is a static model not used for reform but just looking at the impact of the indirect tax system on households. It is not a complete model in the sense that any tax which does not fall directly on households, either through the intermediate inputs into household consumption or final demand, is ignored, which is not particularly helpful. Obviously the ABS one is not going to be used for policy analysis or anything like that. So the Melbourne Institute model, the STINMOD-STATAX and PRISMOD are the three models essentially used for this kind of analysis. That is the background.

I will focus now in on STINMOD-STATAX in particular. STINMOD has had a long track record. In fact, the code is used by the Treasury in that part of the personal income tax and social welfare system. They use that part of STINMOD under licence from NATSEM, so there is a common core in there. Obviously they have changed the code to fit the purposes of modelling the government's package. The STATAX is different from that but has a history which began, I suppose, in the same place. I was seconded to EPAC in 1985 for six months. To show you that the faces never change, at that time Ken Henry and Jim Wright worked on the draft white paper—in 1985.

**CHAIR**—This was the paper of tax options, the one that contained the famous option C.

**Prof. Warren**—Exactly. That is where PRISMOD came from. I worked on elements of that at the very beginning, before the Treasury focused more and went off and built what was then TAXIO, which evolved into PRISMOD.

In terms of working through the construction of these models, there is now a considerable amount of literature on PRISMOD and these kinds of models—STINMOD and STATAX. As you have already heard today, there is some debate about who is right and who is wrong. My only comment at this stage is that everybody is right and everybody is wrong—that is the nature of these particular models. To walk through how you construct these models, essentially—

**CHAIR**—That is incendiary advice to a committee with diverse interests like this one. If everybody is right and everybody is wrong, that enables us to find whatever we want!

**Senator FERGUSON**—Are you suggesting that that will not happen, Mr Chairman?

**CHAIR**—I am suggesting that we should at least show an interest in the case to begin with.

**Prof. Warren**—Just to clarify, I think it is important that you understand, acknowledge and appreciate the weaknesses. Failing to do that means that you will start quoting the results to the third decimal place, and you cannot do that. I will say more about that in a minute

In terms of developing these models, the critical data that goes into STINMOD-STATAX is similar to PRISMOD. The input-output data for 1993-94 is the source of the information that goes into looking at how indirect taxes flow through to final demand consumers. There is an up-rating procedure that you need to do to get that to whatever year you are looking at. The Treasury's year is 2000-2001. In fact, for the 1.9, it is 2001-2002. You need to make projections about how you see the economy growing and how various sectors are growing. Therefore, forecasts from your macro models form an input into that up-rating.

The Treasury has greater access to a level of detail on the input-output data than non-government people. They operate at a 1,500-odd commodity level, but my view is that, at the end of the day, it is probably not going to make an enormous difference at the margin whether you operate at 107 or at that level. The output that goes out of something like PRISMOD or STATAX goes to work with the household expenditure survey. Also working

with the household expenditure survey is STINMOD, which takes that survey data and works that data according to problems it perceives with it to try to calibrate it off against labour force statistics, because the labour force statistics sample is far greater than is the case with the household expenditure survey, which only has 8,389 sample households in it. While sizeable, when you start splitting that up into individual groups, you have a sample problem.

When you are working with the household expenditure survey there are a lot of procedures you have to do to try to overcome the problems that you perceive it might have in terms of the way the ABS has weighted it, or the period that you want to look at in relation to it. As indicated in the paper, there is a process of ageing the base of the data and there are various procedures you use to age that base. Also, you obviously have to not only age the population but also the incomes and the expenditures, and you use various procedures to do that.

Typically, the model at the moment is calibrated on 1996-97 known information—so you are using national accounts, consumer price index and labour force information to move to that particular period. As was said earlier, the critical thing is that these models are comparative static and they do not work in a macro sense—they are snapshot models. They hit it with a shock and feed that shock through. And so you parameterise everything about them. You say, ‘What is the shifting of those taxes? What are the taxes we are looking at?’ You have to decide everything. If you presume a 100 per cent pass through, then so be it. You can assume something else other than 100 per cent, if you like, and that is just another set of parameters that you specify. Obviously, no macro element is being built in. No behavioural response is being considered. No wage effects or employment effects are being considered in these frameworks. They are not built for that.

One of the areas where there is increasing attention is trying to get a better handle on the behavioural response. I have done some work in that area, but it is extremely complex looking at behavioural responses to relative price shifts. That in itself has some interesting findings for these kinds of tax packages. That is the basic structure—your key data sources. I will not go into the technicalities of modelling. In terms of what comes out the other end, STINMOD-STATAX operates in a different way to the Treasury model, but, again, all things can change. The Treasury model outputs tax rates and then applies those tax rates to household expenditure. STINMOD-STATAX allocates the nominal amount of tax revenue that is coming out.

At the end of the day, when the Treasury makes its adjustments—and that is now well documented in the discussion around the Treasury evaluation of Fightback—it makes adjustments which effectively mean that the two different approaches come back together again—they adjust the HES data for under-reporting or over-reporting relative to the national accounts consumption bundle. In that sense, they come back together again in terms of their basic approach.

I suppose it is at that point where the two models deviate—how you then feed that information coming out of STINMOD on personal income tax and social welfare and the information coming out of the indirect tax model, STATAX, and how that is then worked specifically with HES. That is where PRISMOD and STATAX differ and where PRISMOD itself has differed over time as well. Different approaches were adopted in 1985 in the draft

white paper and in the evaluation of Fightback, and in the models adopted in this particular document. That is by way of general background. I can go into more detail, but it is probably easier if I address particular questions. You can hold a day's conference on these things—10 minutes does not get you very far.

**CHAIR**—Thank you, Professor Warren.

**Senator O'CHEE**—You make a lot of use of the household expenditure survey data set. That seems to be a point where you are very much at variance with the Treasury. Treasury say that they do not believe that the household expenditure data set is sufficiently reliable. They took the view that it was not reliable in 1985. They took the view that it still was not reliable in 1992-93, and Dr Henry today said that the Treasury has firmed up their opposition to that. Why should we accept the household expenditure survey rather than use the CPI data set?

**Prof. Warren**—I will tell you the answer to that. If you take the 1985 and 1992 papers, while we all accept that there are genuine real problems with the household expenditure survey—and none of us is denying that—the difficulty is what you do if you do not believe HES. HES is the critical data source for all the people who essentially work. It is used by the Department of Social Security. It is used by the ABS. It is used by all researchers because there is simply no alternative to HES. All of us know its problems and its limitations. What is different about what the Treasury have done this time is the way they have responded to that dislike for HES. This time they completely ignored it. The clearest sort of explanation of the Treasury position is actually in the draft white paper in chapter 22, table 22A1—something like that.

**CHAIR**—This is the draft white paper?

**Prof. Warren**—Yes, the draft white paper in 1985, which is similar to the approach that they adopted. I think it is critical that, if you are going to criticise HES, like any criticism, you have to offer an alternative. My view is: if I accept a criticism, what is my positive response? In 1985 and 1992, they effectively imposed savings ratios which they got some insight from via HES. I suppose that is what is different this time—this time they imposed a different set of savings ratios and responses to different expenditure patterns from what they did in 1992 and 1985.

I suppose our concern as modellers was that they have taken their concern with HES another step further from where it was before. We do not disagree. David Johnson is on tomorrow and he and I and others have expressed this concern. We do not disagree with this concern about HES; we do have a concern about throwing it away, though, and effectively it has been thrown away.

**Senator O'CHEE**—Is it not the case that the ABS themselves do not believe that HES should be used as the data set for this particular type of modelling? It may be valuable in other applications, but is it not the case that the ABS themselves put a rider on it, that they do not believe it should be used for this purpose?

**Prof. Warren**—The danger that the ABS have is that they themselves have used it to do fiscal incidence analysis. While in that same document they criticise it, they proceed to use it despite these concerns.

**Senator O'CHEE**—Why do you believe that using a CPI data set is not an appropriate way to calculate the price flow-ons through various sectors?

**Prof. Warren**—This is to use the aggregate CPI effect that comes out?

**Senator O'CHEE**—Yes.

**Prof. Warren**—My concern is on two levels. It is not just the CPI but they have combined that with the no savings assumption. My concern is that there are differences in the consumption bundle between groups of individuals, and those differences do need to be taken account of. The Treasury themselves have reflected the different impacts that those consumption models have on the price effects for those different households. In their previous analysis they took that into account and in the material the Treasury have subsequently released have indicated how those price indexes vary around the 1.8 and 1.9 per cent average. It is just the different consumption bundles.

One of the issues is that, while there are very small relative price changes over time, whether you use the CPI or some disaggregated index of what has happened to prices and apply those to households is not that important. The ABS have undertaken a study of how, if you look at historical information and how prices have varied over an 11-year period, as cited in the government's white paper, it is critical this time that there are significant relative price changes. There are things going up and there are things going down. In that sense, identifying different people's consumption patterns is significant and needs to be taken account of.

What we as modellers and economists do is sensitivity analysis. I suppose in a sense we are saying that there is one assumption being made, but there are other assumptions. In a sense, there is the sensitivity analysis which gives you a range of outcomes. We are just presenting in our analysis and in our thoughts the range of possible assumptions, some of which the Treasury themselves have adopted in the past.

**Senator O'CHEE**—When Mr Wallis from the UK addressed the committee last week, he said that if he were attempting to do this sort of analysis he would assume that people's spending patterns remained the same.

**Prof. Warren**—But you have to elaborate. In what context was he saying that?

**Senator O'CHEE**—He was saying that if he were doing this simulation he would not try to model changes in spending patterns as a result of relative price changes. He said that his people would not attempt to do that; they would assume that spending patterns remained the same.

**Prof. Warren**—But with what I am talking about with STATAX-STINMOD and PRISMOMOD we have assumed that the spending patterns stayed the same. The only issue I am

raising is whether, when you are looking at the experience of an individual household, you take account of the consumption patterns of those households when you apply the price indexes. That is the issue that we are talking about. In STATAX-STINMOD, Melbourne Institute, and PRISMOD, it is a static model; the consumption patterns have not changed. So we are effectively doing that, if I understand what he is saying. We are not modelling changes in consumption patterns; we are just assuming that those consumption bundles stay the same and the prices change.

**Senator O'CHEE**—I still cannot understand then why, when you are attempting to model the changes in the price of goods, you would not use the CPI data set, which is a description of how prices change. Why would you not use that rather than the household expenditure survey?

**Prof. Warren**—The consumer price index applies to wage and salary earners in major capital cities and the bottom 90 per cent of those people. That is not a pensioner or a welfare recipient. It is not somebody in the country. It is not somebody who is self-employed. Therefore, within the weights you are using in the calculations, you would like to see the experience of somebody else who is not a wage and salary earner in a major metropolitan area. That is why there is a real danger—it is a similar danger to using the CPI to index a pension; it is not necessarily the appropriate index, because it relates to a different group of individuals. Our difficulty is that if you are interested in the experience of a particular individual then you must make it consumption bundle specific. The CPI does not necessarily belong to a pensioner. And that is why we want to use something other than the CPI, which is the index for a particular consumption bundle which is not necessarily everybody that we want to examine in this analysis.

**Senator HARRADINE**—You agree that the HES is an unreliable guide as to the extent of dissaving, don't you?

**Prof. Warren**—Yes. There is a question about how you respond to that concern about unreliability. My approach, I suppose, has been different from Treasury's and theirs has changed through time. My approach has been—and all of these are subject to criticism—to interrogate the household expenditure survey data at great length. Also—and I know I have been castigated for this at great length—I discard those people I do not like. I use professional judgment to remove people. For example, with people with significant negative income, because they are self-employed, you can imagine what ratio, what kind of results, you are going to get. You have to ascertain what you are going to do with somebody with, say, zero income. What about somebody who is consuming two or three times their income? And they fit into all those things that cause you concern about HES. My response in the past has been to ask the ABS in the past, 'Well, what is going on?' If you interrogate the data, pull those households out, have a look at them manually, you find that they are not credible households. It is quite often a function of the way the diary was kept and what they did in the diary period in terms of lumpy expenditures—sometimes durables, sometimes non-durables.

**Senator O'CHEE**—So in that respect you agree with them?

**Prof. Warren**—Yes, but our responses are different. As I said at the outset, all of us are concerned about the use of HES, but equally we are concerned not to lose it. It is too important and valuable a resource for all of us to throw such a data source away. With other researchers, I have been particularly concerned about the harshness of the criticism that has been mounted against the HES. I think the ABS has been somewhat concerned also.

**Senator O'CHEE**—So you accept that there are problems with the HES data set, so you would construct some sort of synthetic data set?

**Prof. Warren**—Well, the Treasury create a synthetic data set. They begin with a set of cameos and then use HES to gain some insight into those cameos. That is the essential approach they take. They use it to gain some insight into what the savings ratios could be and also what the consumption bundles would be for people in certain income and demographic groups. That was the approach in 1982 and 1985, but not the approach in this case.

**Senator O'CHEE**—But I am asking what you would do. You would somehow make a synthetic data set, because you would not rely on HES itself?

**Prof. Warren**—In the work I have done to date, I do not use a synthetic data set; I use the households from HES that I have not excluded for some particular reasons. And you can see those reasons documented in 162 and 163, without reference to me, in the white paper. I discard certain households—what I call outliers, these kinds of issues. So I do not create a synthetic data set in that sense.

**Senator O'CHEE**—You filter?

**Prof. Warren**—Yes, it is filtered.

**Senator GIBSON**—What proportion is filtered out?

**Prof. Warren**—Of the 8,389, I take out about 600 of those households.

**Senator O'CHEE**—So you introduce an element of subjectivity into the data set yourself in doing that?

**Prof. Warren**—Of course, yes. And you will see sometimes reference to that. I have a document here in which the Treasury has called it 'my professional judgment versus their professional judgment'. It is a researcher's judgment, and researchers do that as a matter of course. You do not just use the data without becoming extremely familiar with it and without knowing its limitations.

**Senator O'CHEE**—Absolutely.

**Prof. Warren**—When I get these data sources, I spend a lot of time understanding what is actually happening. If you do not do that, there are real fears and dangers in using that data that something is going to happen.

**Senator O'CHEE**—Yes, exactly, there are real fears and dangers. The problem that one has, I suppose, is to exercise a judgment and ask, 'At what point does the filtering of the data set outweigh the accuracy of the particular prediction?'

**Prof. Warren**—Yes, I agree. And, in a sense, you leave that to me as a researcher with a reputation of having written a PhD in this area and having spent nearly the last 20 years playing with these models in various countries to make that judgment.

**Senator MURRAY**—Can I add to what you have just said?

**Prof. Warren**—Please go ahead.

**Senator MURRAY**—If I heard correctly—this is a very interesting line of questioning—Treasury have said virtually all of HES is flawed and therefore must be discarded. You have answered that the data on 600 out of 8,400 households is flawed—eight per cent—while the remaining 82 per cent can be validly used.

**Prof. Warren**—There is a further step on from that when looking at these. You want to separate out particular household groups that you are interested in and then investigate those particular groups. And, in the analysis I have done, for example, there is a lot of what I call '14 by 10 tables'—14 groups by the deciles—and you do get cell issue problems as you start to apply the HES at that level of investigation.

**Senator MURRAY**—So it is not saying there is an eight per cent margin of error across all the data; there are some household areas where there might be a 100 per cent error rate and others which might be 100 per cent correct.

**Prof. Warren**—Yes, there are some households where there is a far greater risk.

**CHAIR**—Can you give us an example, so we can picture it?

**Prof. Warren**—The self-employed and the unemployed. The self-employed quite often will have very low incomes and relatively high expenditure. They are running businesses. They are complicated.

**Senator FERGUSON**—You are not telling us anything we do not know.

**Prof. Warren**—And the unemployed quite often have very high levels of expenditure, very interesting expenditure patterns—high consumers of the sins of life. So, in a sense, you go through and can see the patterns. That is why I say it is important not to discount the differences between the behaviours and the consumption patterns of those different people. They are quite different, and that is why I still have this preference for relying on HES. Even up until now, the Treasury has gone in and attempted to work with those particular household consumption bundles to try to get some handle on the price effects for those particular households.

**Senator O'CHEE**—But what you are saying to us is that it is not as though the 600 or so that you discard are spread uniformly across the 8,000 households in the data set. In fact,

the ones you have discarded have fallen heavily in certain groups of the data set, certain cohorts, and they principally happen to be the self-employed and the unemployed?

**Prof. Warren**—The way I would view that and the way I have written that up is that those people who have a problem are those people who are typically what you can call ‘in transition’ or doing things that you cannot necessarily explain. They are more obvious about their expenditure, but they are not so forthcoming about their income.

**Senator O’CHEE**—Yes.

**Prof. Warren**—So you have this real issue there. What concerns me is that when you do a critique of the saving ratios in HES and you bundle the bad with the good you throw the baby and the bathwater out—the bad and the good all go out because the good has been soiled by the bad. So, in a sense, I have the view that you need to identify those people who are ‘at risk’ or in significant transition and then categorise them and see what the impacts of removing those people from the sample would be. Addressing a sample like that is not a new procedure; it is quite common.

**Senator GIBSON**—Does ABS basically agree with your filtering process?

**Prof. Warren**—No, I do not think they would put a stamp of approval on it. In their own documents, when they undertake their fiscal incidence analysis, they have a significant disclaimer about the use of HES, as was previously noted. But, at the same time, there is a recognition that, even though it is disowned, it is like the disclaimer you make when you proceed on with care—and that is, in a sense, what the ABS have done in their work. They make the disclaimer about the danger—and these are obviously overriding qualifications to the analysis—and then they proceed on.

**Senator GIBSON**—But ABS do use HES for modifying the CPI when they do their regular reviews, don’t they?

**Prof. Warren**—Yes, that is the purpose in the first instance of the household expenditure survey. That is why it is called the household expenditure survey. Because it is an income and expenditure file, many researchers have taken it as a source of income and expenditure. But its weaker side is income and its stronger side is expenditure. But, being the only data source available, as researchers, you take and work with what you have.

**Senator CONROY**—I am interested in following up on a comment that Professor Wallis put to us when he appeared before the committee recently. He talked about the need for transparency and, in particular, for models to declare their margins of error. This morning, when we asked Treasury about PRISMOD, they said it was too hard to calculate because there were different margins all over the place. Does your model and the models you have been involved in have margins of error? Is it too hard to calculate?

**Prof. Warren**—There is an awful lot of information that goes into these models and the qualifications that they have start right back where you got the data from—so you have to go right back to the input-output data, to the HES data, to the national accounts data that you are using for operating, to the labour force statistics.

One of the important things to remember is that the road to your results is littered with a large number of assumptions, not just those you have necessarily made; it is associated with the way that data was collected. Then, if you ask, ‘Tell me what the element of risk is, or variability’, there could be any number of factors which are going to cause you to differ from others—not just your modelling but also what you did with your data.

I understand the Treasury has worked extensively with the data that they got from the ABS to overcome concerns that they had about that data. Those of us outside are not privy to the extent of the manipulation of that particular input-output data—that they had to work to give it a degree of, if you like, comfort zone that they would then be prepared to work with. So it is extremely difficult to ask a modeller, ‘What is the degree of error?’

**Senator CONROY**—Professor Wallis was quite emphatic about it. I have not got the exact quote but he went as far as saying that if they are not prepared to give you that up front, well, they are having you on.

**Prof. Warren**—I was about to say that what a modeller can do is give you a sensitivity analysis. Then they work through a series of possibilities. They work through ‘What if I used HES the way I used it. What if I then imposed the Treasury methodology, be it the 1992 and 1985 methodology—then be it the 1998 methodology.’ You could call that sensitivity analysis. So you could quite reasonably work through all of those possibilities. That is methodology, in terms of how you work with the household expenditure survey data in particular. Then there is another layer about the fact that there is comparative static and it just goes ‘bang bang’ between two periods. What might be far more instructive would be to look at if it did not, or forget fully shift it forward and then take some sort of phased review of it. So there are various levels. All of those levels can be investigated, be it the methodology, be it the data, be it the fact that it is comparative static and maybe you want to phase the kind of shocks that you are modelling.

**Senator CONROY**—The Carnahan paper—I presume you have had a chance to have a read of that?

**Prof. Warren**—Yes.

**Senator CONROY**—While criticising HES—as the Treasury document I am criticising has—it is not exactly a huge wrap for where they went. It argues that more study was needed, and that more information was needed before you had a reliable figure; it did not say the CPI is the absolute rolled gold way to do this. Is that a fair statement?

**Prof. Warren**—Yes. Like others, I was looking for the supporting literature, and why there was a significant change in position from 1992 and 1985. It was not forthcoming from that, other than inferred by the title. I did not feel convinced at the end of it. I read the literature and it seemed to me that the precedent was not in the direction where it was leading—so I had some difficulty with that document.

**Senator CONROY**—Could you give us an assessment of the methodology used by the government in developing its tax package? Is that too broad a question for you? You have got about an hour!

**Prof. Warren**—I thought you would say a day! Which aspect? There are many aspects.

**Senator CONROY**—In particular, do you have any comments on the 1.9 per cent inflation estimate that was used?

**Prof. Warren**—That is specific.

**Senator CONROY**—You have got 40 minutes.

**Prof. Warren**—It is obviously a 2001-2002 number; it is not a July 2000 number. I said that earlier. The cameos are at 3.4 per cent indexation—so that is the 1.9 per cent. If we then go back to whether the 1.9 per cent will be the July 2000 number, I think that—on their own admission—it cannot be 1.9 per cent, because FID and stamp duties will not have come out. Stamp duties come out in July 2001, FID in January 2001—so it is going to be a greater number. They indicate that the number will probably be about 2½ per cent.

**Senator CONROY**—They have now admitted it is 2½ per cent.

**Prof. Warren**—Yes. It is in the document.

**Senator CONROY**—Effectively, it is in the document. The number 2.5 is not in the document; we established that this morning.

**Prof. Warren**—Hence the four per cent. The question is whether all of this is going to happen on 1 July 2000. It is a function of the phase down. Part of the effects will start flowing through for the phase down of the wholesale sales tax rate from 32 per cent to 22 per cent once the legislation is enacted, so those kinds of effects are going to be filtering through. A lot of it is a function of education and communication. These are things which are very hard to conjecture. There is also an issue of how effective the ACCC is going to be in focusing the minds of the business community on renegotiating contracts, which is all about getting the tax off their inputs as they go through that intermediate phase. I would have thought that on 1 July 2000 the number is going to be high—potentially higher than the 2½ per cent.

**Senator CONROY**—Is a 100 per cent pass through a brave assumption?

**Prof. Warren**—As an immediate assumption, it is a brave assumption.

**Senator CONROY**—Courageous, even?

**Prof. Warren**—What you have to remember is that half of the wholesale sales tax is a tax on inputs into the production process. Only half of it is directly on household final consumption expenditure. Therefore, there will be a certain block of wholesale sales tax which will be embedded in prices that will take some period to come off. Giving a GST credit for wholesale sales tax does not remove that because it is built in. That is, after all, why this reform process is being embarked upon—it is to remove those. In a sense, there is an issue here about how quickly that embedded tax comes off and what kind of shock happens on 1 July 2000. It is conjecture at the end of the day.

**Senator CONROY**—I am confident that I am going to wake up and every single price that has a new GST on it will be 10 per cent higher. I am sure you do not need an education campaign to the business community to put the price up.

**Prof. Warren**—I would have thought that that will not be the case. I have given a lot of presentations on the potential price impact and so on. All I can say is that there are a lot of businesses out there which are extremely focused on the ACCC, and the advice to businesses is to start documenting what you are doing now so that you can explain it to the ACCC. I would have thought that that kind of issue itself will definitely focus minds, particularly the big retailers. I have heard the Coles Myer people talking at length about renegotiating all their contracts, making sure tax comes off their supply contracts. They are fairly substantial when it comes to the retail market. I would not be that pessimistic at all.

**Senator CONROY**—We had some discussion this morning about the cameos. Given that they use 2001-02 rather than the first year effect, do you think the package has misrepresented the impact?

**Prof. Warren**—No, as long as they tell you it is 2001-2002. As long as they do that, then what they have presented there is factual information.

**Senator CONROY**—I certainly did not realise that, and I have been involved in the process a bit more than ordinary Australians. Do you think ordinary Australians who picked up the leaflet in their mailbox or watched the \$19 million advertising campaign understood that this was not the first year cameo, that it was really a second year cameo?

**Prof. Warren**—I remember getting the leaflet but I cannot necessarily remember reading it because I already had the main report. I understood that they were 2001-02, because the long-term compensation is 3.4 per cent, whereas the short-term compensation is four per cent. That is how I came to understand that that was the 2001-02 number. So I understood that but I cannot speak for others.

**Senator CONROY**—Do you think the cameos are wrong in that they overstate the benefits to households?

**Prof. Warren**—That is like a question to a modeller: in a sense, it is the modeller's assumptions that you are asking me to comment on. As I have indicated to you, I would adopt different assumptions. Treasury in the past have also adopted different assumptions. Put three modellers in a room and you get 10 different points of view. That is the reality.

**CHAIR**—Depending on how many assumptions you use.

**Prof. Warren**—There is probably an infinite number of possibilities. You can certainly disagree on how you go about this and the strength of your disagreement can vary. I disagree with their assumptions, but they can make those assumptions. They can criticise mine and I can criticise theirs, but that is the nature of modelling and sensitivity analysis.

**Senator CONROY**—Isn't the problem with using the CPI figure that it makes a broad assumption that pensioners and millionaires have the same savings pattern and the same

consumption pattern? Is that not the fundamental flaw of why CPI is not the best indicator available?

**Prof. Warren**—There are two levels: there is the level that you said and also that everybody spends everything they get after they have paid income tax. They are two important assumptions. I am on the record as stating that I have difficulty with both those assumptions because everybody does not spend everything they get and some people are at a stage in the life cycle where they spend, especially with low interest rates. I know self-funded retirees who are eroding their capital base, so they would disagree. Sure, there is a savings bonus in there, and so on, but we are just talking about those two basic assumptions. I have difficulty with those assumptions and the results from them because in a sense the Treasury has not made those assumptions before and it is the nature of those that I have a difference of opinion on.

**Senator CONROY**—Treasury admitted today that tobacco was worth 0.3 and that they have not included it in its 1.9. Do you think it is fair to use the 0.3 as describing a reduction in those benefit tables that they have circulated so widely and wildly?

**Prof. Warren**—There are legitimate arguments for not compensating the sins. If you believe that those taxes are there and that it is just straight economics, as some sort of recompense from government for the impact that it has on health and those kinds of issues, then it is unreasonable to tax people for a bad and then compensate them in return for that. It is like why do we have drink-driving campaigns and all these things, and why do we do what we do in relation to alcohol? It is about trying to alter consumer behaviour, and compensating them nullifies that altering of consumer behaviour that you had set out to achieve. It is quite reasonable to make that kind of exclusion.

**Senator CONROY**—I have heard the department of health argue that. I have never heard a Treasury official, when it comes to money, argue that it is there as a health issue.

**Prof. Warren**—I would have thought that that was the kind of argument that lies behind the move on tobacco coming out of the Heart Foundation and to move to a per sticks system rather than by weight—it is all about health issues. I have seen the National Cancer Council's submission and they are very much of the view that yes, these changes in tobacco are necessary and no, you should not compensate people for that. They know a lot more about this area than people like myself, and I would have to agree.

**Senator CONROY**—On the *7.30 Report* on 12 October this year, you said the government:

... overestimates the GST on the higher-income groups and underestimates the GST on the lower-income groups.

Could you just expand on that for us?

**Prof. Warren**—Those are the two assumptions that everybody spends everything and everyone's consumption pattern is the same. If you relax those assumptions, and go and adopt the kinds of assumptions that Treasury made in the draft white paper and in their analysis of Fightback, you find food is a larger part of the consumption bundle for the poor

and the lower income groups, and that the CPI for food is higher than it is on average. Therefore, taking account of that consumption bundle will mean that there is not enough burden of GST on the lower groups compared to the high groups—and equally with savings ratios. Both of these reinforce each other, because with the savings you are allocating too much GST to the higher groups and not enough to the lower groups, who could be potentially dissaving. You elaborate that point on those two key assumptions.

**Senator CONROY**—I have just one final question regarding the macro-economic benefits of the GST. On *Four Corners* on 18 May this year you said:

. . . people are saying the GST will solve all our ills. I mean, the GST will not, and I think it's a mistake to say that it's going to cure our foreign debt and create thousands of jobs. It's just not going to do that . . .

There have been claims that the tax package will boost national savings, economic growth, exports and jobs. Do you consider that there will be major gains or, as you said in a recent paper, that some of these gains will be marginal?

**Prof. Warren**—This is a long-term position that I have had and I have never deviated from it.

**Senator CONROY**—Well, I have read it extensively.

**Prof. Warren**—This is my view. You are not undertaking this indirect tax reform to revolutionise the Australian economy. You are undertaking it because you have to undertake it and it is a matter of time before you have to do it. You can delay it. Labor tried in 1985. John Hewson tried in 1992. The fact is Asprey recommended change in 1975.

You are never going to get away from the fact that you must address the indirect tax issue. You must address it not because it is going to revolutionise your economy but because of the consequences of not addressing it. It is going to be the consequences of what states will do; it is going to be the consequences of taxing goods and not services and the erosion effectively over time that has on your tax base. It is all about—and I have said this numerous times—good housekeeping. You must do it.

I have an opportunity to make a comment on Peter Dixon's work. One of the things that I think needs to be said on this, if I had a comment of his, is that it is not reasonable to compare now to five years out. In other words, you assume your current situation as your benchmark for comparison. I think it is equally important to compare where you will actually be in five years time and not assume that what you have now is where you will be in five years time. In five years time, your states will be doing something very different from what they are doing now, so your benchmark five years out should be not now, it should be something different. That is where you come at and that is where I come at in terms of the need for indirect tax reform. You need it because of where you are going to be in five years time.

Don't assume you are going to be here in five years time, with this system looking like what you have. We did not have this system we have now five years ago because five years ago we were just about to have a Labor budget which introduced changes to petrol, tobacco,

alcohol and changed the wholesales sales tax. The states then ratcheted up their tobacco because of cutbacks of states grants and the federal government, then they lost their tobacco, and now they are looking for other avenues. If you do not have this reform, that is the issue. I think that is really the critical thing that you need to take account of when you are thinking about the macro aspect.

**Senator CONROY**—WST—a great tax?

**Prof. Warren**—Not if it is on goods. You can ratchet up the rates as much as you like but—

**Senator CONROY**—But it is growing faster than GDP.

**Prof. Warren**—The revenue or because you have ratcheted up the rates?

**Senator CONROY**—The revenue.

**Prof. Warren**—As long as you ratchet up the rates, you can make the revenue run for a while, but you are creating greater differential price effects.

**Senator CONROY**—I thought at the moment that its growth of revenue was running ahead of GDP growth.

**Prof. Warren**—That would probably be because so much of the revenue is raised from motor vehicles. If you have a look at where you get most of your wholesales sales taxes, you have a 22 per cent tax on motor vehicles. If you look at motor vehicle sales last year, they were 700,000-odd. Have a look at the tax statistics for car parts and cars. You get a massive amount of wholesales sales tax out of motor vehicles. So I would look at how you are taxing that sector as an explanation of why it is why racing ahead rather than at what you are getting from all the other sectors.

**CHAIR**—On pages 34 and 35 of this tax package, the ANTS package, it shows how in terms of Commonwealth and state outlays savings are made of over \$500 million per year immediately from July 2000. In view of the remarks you have made, Dr Warren, about the flowthrough of these sorts of changes, is that a heroic assumption?

**Prof. Warren**—There are a number of assumptions in there about dividends that the state governments and federal governments will get effectively from these efficiency gains.

There are issues in relation to black economy compliance costs. They are assumptions that you make as a matter of course. The Treasurer would be remiss, I think, not to factor something in there for the potential benefits of taking off that input taxing from state governments—similarly with the black economy, not just in relation to the GST but in relation to the ABN and the whole compliance push the tax office will be embarking on.

So I do not agree with the ‘in principle’; you can always debate the magnitude rather than the ‘in principle’ of what they are doing. I am not versed enough to be able to say, ‘Yes, they are right,’ or ‘No, they are not right.’ I would simply say that I would put it in

there too. Fightback had it. The draft white paper had factored in the black economy and other benefits. So as a matter of course you should acknowledge and take into account those factors, but what the magnitude is I cannot really say whether they are right or wrong. But I would put them in and leave to it their judgment whether those magnitudes are appropriate.

**Senator MURRAY**—Professor Warren, where expenditure is considerably different to income in terms of the HES comparison to national accounts, if it were dissaving, it would be qualified as having either come from own capital or transfer payments from somebody else's capital, such as a parent to a student, a loaning company to, again, a student or, I presume, wealth, bequests and that sort of thing. If it is not dissaving of that kind and there is significant difference between income and expenditure, that would then indicate where the black economy is, yes?

**Prof. Warren**—Yes. One of the difficulties that I have is not so much just with HES but also with the national accounts. I would have thought there are enough concerns and problems to say that maybe you are capturing the expenditure side reasonably well but maybe you are not capturing the income side that well. That goes to the heart of whether we as a nation have a savings problem as well, and I will not get on to that issue.

Yes, you do have an issue there about the extent of income sources. No doubt if you are not telling the tax man what your income is, when filling out a HES questionnaire you would not tell them either but you would not mind telling them what you spend.

**Senator MURRAY**—If you are receiving money from the black or cash economy—and I do not know where you would fit in the income profiles—presumably part of it would be saving and the rest would be disposable income or expenditure. The tax people this morning indicated I think—and perhaps somebody can refresh my memory—the cash economy was worth about \$18 billion. When you are looking at the differences between income and expenditure would you be able to validate that figure?

**Prof. Warren**—I thought their estimate was between \$5 billion and \$15 billion, and that \$5 billion was their bottom level.

**Senator MURRAY**—I thought they said \$15 billion to \$18 billion today.

**CHAIR**—It was said that Tax had estimated \$15 billion, but Treasury said \$18 billion and that it was five per cent of revenue. I do not know if \$18 billion computes to five per cent. I suppose it does.

**Prof. Warren**—There are various approaches to try to get a handle on the black economy. One is to use the household expenditure survey just like that and to say that what we are looking at here with the savings ratio is really the black economy. That is why you hone in on particular groups, some of which I flagged earlier as being my at risk people that I removed—potentially the unemployed and the self-employed.

There are other approaches too, such as notes in circulation. That is a big method of identifying the black economy. I was at a seminar about 12 months ago where the Reserve

Bank was talking about the number of bills of different denominations in circulation. You would be most impressed by the \$100 bills that are in circulation.

**Senator FERGUSON**—Unimpressed.

**Prof. Warren**—Or unimpressed.

**Senator MURRAY**—But this has considerable revenue consequences, doesn't it?

**Prof. Warren**—Yes.

**Senator MURRAY**—Let us assume that it is \$18 billion and that was now going to get a 10 per cent GST put on it. That would be \$1.8 billion, but part of that has already been taxed—say, 30 per cent of it—on the wholesale sales tax side, so maybe you just take 70 per cent of that. You are now down to about \$1.2 billion or \$1.3 billion. Knock off a few hundred thousand dollars for other errors and you might be down to \$1 billion, which is a lot of money.

My question to you is: you identified the major difference between income and expenditure as the unemployed and the self-employed. The inference, therefore, might well be that that is where the black or cash economy lies principally. It might not be, but that is how I follow through the argument. If that is so, it would be helpful—not now, but later—if you could look back at your figures and see if you came anywhere near a possible \$18 billion—or more or less—for the black or cash economy—unaccounted income, if you like.

**Prof. Warren**—There is some literature around. I can look at that.

**Senator MURRAY**—I would appreciate that. That really follows on from Senator O'Chee's remarks. Following Senator Conroy's questioning is the question of when the flowthrough comes from the reduction in wholesale sales taxes and other indirect taxes and the imposition of the CPI. In your answers I do not think you gave a time frame. You agreed that the increase would be relatively soon but the decrease might take time. Treasury also agreed with that, but they put the whole cycle within 12 months. I think the Labor senator's point is it is likely to be longer. Do you have a time frame during which it will occur?

**Prof. Warren**—One of the most interesting things that I have seen on this issue is a document that Bruce Freeland from the Commonwealth Bank did on looking at the experience of other countries introducing a GST and what happened to the price effect, the ramping up, and how quickly it came off. That is the most instructive document, and it shows that it comes off within one to two quarters. There is a ramping effect, but there is some pulling back, which means that those input taxing factors are taking some time to come off. If you look at that—and I have looked at it—the Treasury are probably not too wrong to say that within 12 months most of that will come through.

When you look at these countries, a lot of this is a function of the economic environment in which it is all happening. There clearly is the risk that we have the Olympic Games in the middle of all this. There will be potentially some pressure at that stage. But I think you

should look at the post-Olympic period where there could be considerable backing off after a real wave of excitement and when there will be real pressures.

The critical thing is to look at the economic environment in which it is introduced. There has been a general view—and it is expressed in some OECD reports—to bring in a GST in a recession, not in a boom, because that keeps the flow-through correct in terms of what comes off and what goes on. I would have thought that within at least six months you are going to have a post-Olympic period. I would have thought that, within six to 12 months, that is probably a reasonable time horizon as to how much banks up in the first three months. It is conjectural. It is very difficult.

**Senator MURRAY**—Still on the household expenditure survey, my Labor colleagues explored Treasury's view that HES is pretty worthless. I am not sure that is Treasury's view, despite having heard it today. I draw your attention to—certainly my colleagues on the committee would be aware of it; you might be aware of it—the release on 11 November of a set of documents by the Treasurer related to the household expenditure survey. There was a rather interesting, entirely academic debate between Dr Carnahan and Phil Gallagher from the modelling task force. The Phil Gallagher paper is much shorter, but he rejected many of Dr Carnahan's arguments. He concludes:

The HES expenditure data documents allow us to estimate price effects which are statistically reliable and which show that the retired and pensioners have compensation needs beyond the average of all households.

I simply put to you that confirms your own remarks to us that Treasury do indeed use HES as reliable and valid indicators in certain circumstances.

**Prof. Warren**—I think in that same comment Phil goes on to indicate that there are a large number of other government departments and organisations which rely heavily on the household expenditure survey to look at the kinds of issues that involve these income and expenditure files, including the retirement income modelling unit. It is critical to have these integrated files.

As I have said, the real concern is that this is a critical data source that we all need. Yes, we want the integrity to be improved and everything that can possibly be done, but these criticisms should not be seen as fundamental in the sense that we do not start collecting the data, that we do not do it anymore. That would be the most amazing disaster for social researchers such as me. That is the concern that I have and that I think Phil, David Johnson and others have had that we need HES. We only get it every five years. It is a very valuable resource. We use it in the way that I have indicated. It is quite crucial to our analysis.

**Senator MURRAY**—I assume you are afraid that if Treasury genuinely hold this view they might deny funding for the next HES.

**Prof. Warren**—I suppose that is one of the things that worries me. It could cast such dispersions across HES that the income side is so risky that they only focus on the expenditure side just to collect data for the CPI, and then to avoid this kind of debate we do not collect the income data. You cannot imagine the implications of that for researchers around Australian academic institutions if that were the outcome.

**Senator MURRAY**—My colleagues on my right—I think I caught it correctly—said that it will be the government that makes that decision, not Treasury.

**Senator FERGUSON**—I did not know my voice carried so well.

**Senator MURRAY**—They are quite right in that remark. Moving on to the dissaving effect, which is pretty critical in all this discussion of modelling, Treasury says that at its maximum they could not conceive that the saving effect would be greater than 10 per cent, if I understood them correctly. They said that, even if that was so, that adds only 0.19 per cent to the CPI. The inference, therefore, was that dissaving as a consideration can just be assumed away. You can virtually ignore it. My return to that is that dissaving still represents a massive amount of expenditure for particular critical population sectors, such as those we have discussed earlier. What is your view on the Treasury's playing down of the dissaving area?

**Prof. Warren**—You cannot ignore that there are some people who are at that stage in their life cycle where they are dissaving. You could counter that by saying that, even if it is an issue, there is a savings bonus there for older Australians in that sense as a one-off compensation. I suppose it is the issue about sensitivity analysis. We do not have the kind of transparency that is in the draft white paper on table 22A.1 in 1985 which tells you exactly the savings assumptions they made across the household—the cameos that they investigated: zero for every savings ratio and the CPI is the constant. This is the table of the CPIs for each group and of the savings ratio for each group. That does make a difference. We are not even conjecturing whether the next step is that people become losers. Hopefully there is enough compensation in there. It was just more information on this issue, which is not an issue that can be lightly dismissed for a retired person consuming their capital base.

**Senator MURRAY**—I would assume that dissaving is of greater importance in a period of recession and a period of high unemployment—and those two might not go together—than in a period of boom or in a period of growth. Is that right?

**Prof. Warren**—I would have thought that there are two categories of people who dissave—the people in transition and the people who are just simply doing it because of life cycle considerations. Life cycle considerations are fairly independent of the economic cycle unless that influences interest rates and they are living off their capital base. Even then, inflation can effectively erode their capital base anyway. So it can be an issue for that particular group. You are probably less concerned about the fact that people are dissaving in many senses because it is simply a transitional thing. It is not a permanent occurrence. To me, the issue of dissaving is more of a concern in terms of those who are at that stage of their life cycle where they are dissaving. That is an issue. I am less concerned about those people who are dissaving if it is a transitional experience.

**Senator MURRAY**—If you wanted to be prudent and avoid undercompensating, I presume it would therefore be prudent to assume the maximum dissaving so that you did not arrive at a situation where that particular sector was in recession or was subject to unemployment or whatever the issue was.

**Prof. Warren**—Of course. You can address people's concerns by simply increasing the level of compensation. It would be relatively straightforward to do that. Once you have done that you have added an additional buffer that addresses this concern, rather than forcing you to look at issues such as taking food out and all the knock-ons that go from that. All of these issues and all of these assumptions that we are concerned about and discussing can be addressed by simply overcompensating by a greater degree than what you might initially consider.

**Senator MURRAY**—If the consequence of government policy is to cost shift, say, from the welfare sector back to parents and parents are now having to pick up costs and charges which formerly they did not—such as up-front HECS fees or earlier cut-off points or if the means test tightens—it is not really dissaving for the parents because they are not spending it. It is kind of dissaving for the students. Instead of them drawing off the state, they are now drawing off the parents in that circumstance, aren't they? Has the modelling and the approach to the modelling taken into account sufficiently changed government policy and the way in which it is impacting on particular groups who now have to be more self-reliant, shall we put it, than they were formerly?

**Prof. Warren**—The issue of intra-family—that is, transfers between blood relatives, between parents and children and the dynamics of how they might respond to those situations and what the implications might be—has not been looked at, not to my knowledge.

**CHAIR**—I thought it was very easy if you were a parent. You pay all the children's bills no matter what they are or how old the kids are.

**Senator MURRAY**—Except some of them used to be paid by the state and now you pay those as well. The \$6 billion of state taxes were regarded as second order effects in the whole transfer through of price benefits and tax benefits. From your experience, do you think businesses will readily identify those categories of tax reduction, which at present are almost lost in the general costs of a business? Obviously I am thinking principally of FID and BAD but also stamp duties, which are lumpy by nature of the transaction. I understood very much the Treasury's argument, and I will not restate it to you. But is it even probable that all those will be passed on?

**Prof. Warren**—Those state taxes do not start coming off in any significant way until the FID and stamp duties come off. They are at least six months out. They are taxes which are not clearly assigned to inputs in the way that is normally the case. Those effects will, I would expect, take longer to come through because of their distance from an actual commodity. That is the case with FID on business inputs, but a large proportion of the FID is also on households. That is going to come off instantaneously. It will not be there anymore. That will have a direct and obvious impact. None of the stamp duties are on households—none on the conveyancing—so those ones will take longer to filter through. But the FID will come off rapidly and that will be very visible, although it obviously will not come off until January 2001.

**Senator MURRAY**—On housing, the Treasury includes the first home buyers' rebate as a cost reduction rather than as an income supplement. David Johnson disagrees with this. Is

there a difference? Does it make a significant impact on the CPI, in particular cameos, if housing is included as a cost factor rather than an income supplement?

**Prof. Warren**—There is an issue here where, if you are a home owner at the present moment, you could say the approach they have taken is not an issue. If you are going to become a home owner, it is maybe not so much an issue. If you are never going to become a home owner and you are going to rent, it is a potential source of concern, because there could be no ultimate compensation for you for any input taxing that might arise from changes in rent that might arise or whatever. It is very hard to conjecture what exactly is going to happen when this comes in. So, if you assume that everyone is going to become a home owner, the approach that Treasury has taken is probably not unreasonable—to remove it and take that particular approach. If people are going to become renters only throughout their life then there is clearly an issue there, although you could then say that under the age pension, if those people were not going to become home owners, they would be getting welfare in their later years and therefore they might get some compensation through the rental supplement.

**Senator MURRAY**—But the government has identified this area as an area of particular interest. When we look at the various effects of the package, we are able to say, ‘Oh well, self-funded retirees are X number, unemployed are X number, rural and regional Australia are so many and students are so many.’ We can quantify and try and work out the effects on large known groups. But to me this area is amorphous: I am not certain how many people and what kind of people are affected by it. Is it significant enough to be an issue?

**Prof. Warren**—I would really have to take that on notice, because I just do not know the information to a level to give a precise answer. It is extremely complicated. You have public housing and you have a private rental market. Private rental people you could say are people in transition to become home owners. With the public housing market, if there is a limit on what the rent can be and people hit that limit, maybe it is not an issue for that particular group. In a sense—this has not been done, to my knowledge—you have to pull that apart and look at what is actually going to happen. Those people who are home owners now are already going to get effective benefit because the house prices will go up, and so they have been protected, as long as they are currently first home buyers, with this new scheme. I can only say it is subject to further analysis.

**Senator MURRAY**—I would appreciate that, because the government’s view is that this home buyer area is an area where they want to apply significant compensation, and yet I am not sure where the statistical fount is—whether it is simply someone’s good idea or it is based on the fact that X tens of thousands or X hundred thousand people of such and such a type are affected. I do not know whether someone else in the committee has seen that information, but I have not, not in the documents. I just cannot really work it through. That is all I have for the moment, Mr Chairman.

**Senator HARRADINE**—Time is on the wing, but I have a question which needs a factual answer, I suppose. Could you point me in the direction of studies that have been done about the savings patterns in particular households, for example, low income households as against high income households and so on? Has any modelling been done which would go to the effect of the GST on those particular households? I know that we

have in the government document various examples, but I would like to ask you that. Secondly, isn't it axiomatic that the burden of the total package, particularly the GST, would fall heaviest on those households where the great part of the income immediately goes out in the form of expenditure on consumption?

**Prof. Warren**—Can I answer the last part first. If you look at the package as it stands, in terms of what you are saying about it impacting on those where there is an in and an out—you get the money and you spend it—yes, there is an issue there. The other thing that is not factored into any of this analysis that is important in the totality is the extent of the black economy and the extent of the changes in the business taxation. To give you an idea of the numbers that underlie this document, when you are talking about this tax package, there is assumed to be \$1.7 million of the GST coming from the black economy and there is \$1.4 billion assumed from income tax compliance. They are the numbers in this government's own document. None of that is distributed or allocated to anybody in this analysis.

None of the distributional impact of changes to entities taxation—which is substantial—has been allocated. While that is probably also true, one of the things that I find slightly disappointing is that they have not—and I understand why, because it is extremely hard—identified the definite losers out there. They are losers because we want them to lose—they are the black economy people. That is an issue at the bottom end, but there is also an underestimation of the income tax at the top end as well, potentially, which is not insignificant if this compliance cost and GST is effective. That is just an observation. Do you want to elaborate further on precisely what it is that you are concerned about with those people where the money is coming in and the money is coming out?

**Senator HARRADINE**—I raised with the officers of Treasury today the question of what percentage of income of a particular household goes out immediately in expenditure. With the lower income groups, obviously 100 per cent plus sometimes goes out.

**Prof. Warren**—I can answer part of that through answering the first part of your former question which I still have not answered. The first part was in relation to savings ratios. While there has been a lot of discussion about the problems of using HES, and you have probably seen the information that the Treasury itself has presented, that in itself is not hugely helpful because it just shows you the problems you have with HES. The most transparent presentation of the Treasury's own view of what the savings ratio would be is in the draft white paper at table 22A.1. It is an extremely nice table which sets out what they view as the savings ratios for people.

**CHAIR**—We will get the secretariat to provide a copy of that table to all senators.

**Prof. Warren**—Yes. It is extremely good, because it sets out all the savings ratios for all the people; if you like, it is the Treasury's own view about these savings ratios and, in a sense, it is in the language that you want to talk. Other studies have tried to work out functional forms for what the savings ratio will be, but none of them is going to be quite as transparent as this presentation here. They set out the price indexes of option C and how it varies from the 6½ per cent.

It gives the elements for various groups. For example, for a single age pensioner with \$5,000 in the period we are looking at, the price index was 7.5, even though the average was 6.5. The kind of things with which you are no doubt concerned are represented in that single table. It is definitely worth looking at. To me, it is one of the more transparent presentations of the difference of opinion, because in terms of that table what is different now is that it is zero for every savings ratio and 1.9 for every price index. That is how that table now looks. You could discuss whether you feel that is the case.

**CHAIR**—The fact that you have got a GST does not mean that you have not got a black economy. That is true, isn't it?

**Prof. Warren**—Yes.

**CHAIR**—I have in mind a table I saw printed in the *Economist* magazine some months ago which, with all the disclaimers one would expect about differences amongst various economies in the world, tabulated the percentage of the black economy. They nonetheless rendered a table of OECD countries by size of the black economy. I have to say up front that their disclaimers were about how difficult it was and how people were working from different bases to make comparisons. Is the black economy inherently bigger or smaller according to whether or not you have a GST, or does it operate according to another completely different mechanism?

**Prof. Warren**—There are two sides. One is that the GST will never get rid of it and it is wrong to then say that, because you still have it after you have introduced a GST, the GST is a failure. I think both of those are not particularly helpful. Subsequent to that coming out, I talked to a number of Europeans about why that might be the case. I talked to a person from Potsdam University in Berlin. I said, 'What is going on? It is particularly high in Germany. What is causing the black economy to be so big?' He said that it was the deregulated labour market across the European Union.

He said, 'I look out my window and I know that a lot of those people are going to be migrant workers who are operating in the black economy. They can travel freely within the EU without passports because the EU is now a deregulated labour market.' You get a lot of people moving around and an inability to track them. So that black economy has grown. It has very little to do with a GST; it has everything to do with the nature of the European labour market. That is why, if Europe is to address that black economy, it has to have one institution to do income taxes and a European tax file number type situation. It is not just a GST; it is a bigger issue.

**CHAIR**—Did I understand you correctly when you said that in Europe the size of the black economy has grown?

**Prof. Warren**—But it is not related to GST; it is related to those other factors.

**CHAIR**—No, but it has grown. In many European countries there is a GST, so is it right that, irrespective of a GST, the size of the black economy has grown in Europe because of a range of other factors, principal among which is the deregulated labour market?

**Prof. Warren**—And I would qualify that by saying that it is reasonable to assume that our experience will be different from the European experience. Firstly, we have clear boundaries. Secondly, we are integrating the tax with the business number system and the business activity statement. You are integrating all the business taxations onto one form. You are operating with one number that businesses will deal with. I have been around a lot of business presentations, and the responsibility on business to get their systems up to a level that they are currently not at is considerable, which means that PBN has real potential impact. Everything is brought together on one number. Europe does not have that. The UK does not have that. That is its strength. So with respect to the black economy, my response is that we do not know what is going to drop out of that single number system but it is clearly a significant boon for clamping down on compliance problems.

**CHAIR**—I understand what you are saying. However, we do have an increasingly deregulated labour market and a labour market with a very sticky level of unemployment—about eight per cent—and an increasing number of longer term unemployed. That seems to be, from what you said earlier, a precondition or a likely fertile ground for the growth of a black economy.

**Prof. Warren**—To tie that up with ABNs, if you do not have an ABN and you want to supply somebody with an Australian business number, they then apply a withholding tax to the payments and send it off to the ATO. The strength of the ABN is that if you want to stay in the black economy you have to stay in it in its entirety. You cannot interface at any stage with any state or federal bureaucracy, because as soon as you do you will be asked for an ABN. If you deal with any business, you will be hit with a withholding tax.

The other side is that the compliance cost for business is probably going to be quite significant as a consequence.

**CHAIR**—Yes, I fear that we will not be able to come to compliance cost issues today. Looking at the black economy, who are the black economists? Who are the people who live in this economy most frequently? From what we discussed earlier, they are most likely to be low income earners—

**Prof. Warren**—Yes.

**CHAIR**—And self-employed trades people—people of that nature. Is that fair? Is there another notable category that I am missing?

**Prof. Warren**—The categories typically raised by the tax office will be the skimming kind of exercises in small business—cash businesses that the tax office regularly audits. It has these people in prescribed payment systems to try to capture them.

**Senator FERGUSON**—Aren't self-employed on high incomes and top tax rates?

**Prof. Warren**—Up until recently they have been able to collect welfare as well—through fringe benefits. Now that is on group certificates so that issue has been in part addressed. So it is people operating in cash businesses, and the danger for these people is that once they decide in the new system to sell to somebody with an ABN they are going to

have a problem. Everybody will be looking for tax credits. That is the name of the game with portfolio value added tax.

**CHAIR**—Is it a reasonable assumption, therefore, from what you are saying—leaving aside for the moment, for the sake of the discussion, self-employed tradespeople, people of that nature, albeit that many of them might in fact be on low incomes—that a GST is likely to make living standards more difficult for the unemployed group who are members of a black economy? One does not necessarily approve of them avoiding tax, but they are unemployed and they have very difficult living conditions. They will now have to pay a tax and their position will worsen: is that a fair comment?

**Prof. Warren**—It is an interesting observation, given that we all feel that everybody should pay their fair share. A friend of ours who is in a small business said that the people who do the cleaning in their office are effectively black economy and would go on the dole if they were not in the black economy. That is obviously going to be an issue in all of this. The dynamics of it might be that either they ask for a higher wage or they do not do it at all. So that is always going to be a risk in this but then you have to stop and ask yourself whether you want to have that kind of institutionalised black economy.

**CHAIR**—Sure, there are balancing questions, but they are a group that are more likely to be more adversely affected at the present time. That is my only point.

**Prof. Warren**—Yes.

**Senator FERGUSON**—If someone is unemployed and involved in the black economy they are not really unemployed, are they?

**Prof. Warren**—That is right, and you do not want to condone what they are doing.

**CHAIR**—I am not suggesting condoning it. But given a very high level of long-term unemployed, without condoning it perhaps one can understand it. That is the point I am making. I am not expecting the committee to support it.

**Prof. Warren**—Yes.

**CHAIR**—I understood you to say earlier that the introduction of the GST as proposed by the government in its tax package will earn \$1.7 billion from the black economy. Were they your figures?

**Prof. Warren**—They said they assumed the black economy was five per cent and that they would capture that. So if just do your calculations on \$32 billion you will get that much money. So that is obviously an assumption they have made about revenue they will collect through the GST from the black economy.

**CHAIR**—That is a figure you have calculated from what they have said?

**Prof. Warren**—You just have to work backwards from the number they told you. If you know that, then you can just work it out. Given that they said the black economy is assumed to be five per cent, then it is a straightforward calculation.

**CHAIR**—That is capturing all of it?

**Prof. Warren**—No, you have a set of national accounts and you make an estimate. It is a double-barrelled thing. And this is also the case in the draft white paper, a similar sort of approach. You say, ‘This is final demand for households,’ you assume there is an error of five per cent in what you will capture and then you also assume that this is five per cent down on what it could have been, because of the black economy. That is the nature of the two-step process. So they have assumed that they will not get five per cent of it, but then they have assumed that the number should have been five per cent bigger anyway because of the black economy. That is the approach that is taken.

**CHAIR**—The Treasury this morning said that the size of the black economy—I can go back to the *Hansard*, but I am sure this is an accurate quote—was \$18 billion. Someone—I think it was Senator Conroy—said that the tax office says it is \$15 billion, and they jibbed and they said, ‘No, it is \$18 billion.’ I am glad that they are that precise. The Prime Minister has said that this tax package will recover \$3 billion from the black economy.

**Prof. Warren**—That is right.

**CHAIR**—How would that have been calculated?

**Prof. Warren**—It is 1.4 plus 1.7. Remember—I am glad my numbers stack up—the 1.4 is from income tax—

**CHAIR**—\$1.4 billion is the income tax part.

**Prof. Warren**—And 1.7 is the GST—3.1.

**Senator GIBSON**—I want to check something with you. The experience in New Zealand was, when they brought in the GST in 1986, they picked up an additional 100,000 businesses over and above the original Treasury estimate of 180,000 that they were expecting. In addition, they picked up additional income tax because of the new system. So their experience basically confirms what you are saying. Am I correct?

**Prof. Warren**—The tax office at a presentation yesterday and also in their regulation impact statement that goes with the GST estimated 1.6 million GST taxpayers after the end of the first year. That is a reasonable number to assume. And there will be 2.1 million Australian business number registrants. So that is getting pretty comprehensive when you have got about 9.9 million PAYE people. So that is a pretty high level of penetration of ABN. That means that you are now tying all these people together.

**CHAIR**—I took your \$1.7 billion down as meaning \$1.7 billion from the black economy.

**Prof. Warren**—It is from GST.

**CHAIR**—From GST on the sale of goods. The other \$1.4 billion is from income tax from people who do not now pay income tax.

**Prof. Warren**—They indicate it as income compliance.

**CHAIR**—So, if we reduce the Treasury estimated black economy of \$18 billion by \$3 billion, we have still got a black economy of \$15 billion.

**Prof. Warren**—No, what you are doing is taxing the expenditure of those people involved in that black economy. You could ask the Treasury to clarify it, but I would presume that there is a certain bulk of activity out there that involves people earning income and people spending that income. So what we are saying is—

**CHAIR**—That is not tax forgone; that is their total earnings.

**Prof. Warren**—That is their total earnings. There have been various estimates of how large the black economy is. And you would expect the government not to admit that it is too big, because it would be admitting the failure of a tax system if it is too substantial. Frankly, we will see how big it is pretty quickly—in about 12 months time when the registrations start for the GST in November of next year. New Zealand said they would get 180,000 and they got over 350,000, and they picked up a lot of businesses registering as businesses at the same time. By definition, you do not know what it is. The ATO does not know what it is. You can only conjecture, but it is not going to be insignificant.

**CHAIR**—Another thing which, by definition, we do not know is the level of tax avoidance. Are there any estimates, though, that you know of, about the current level of tax avoidance rather than the number of people trafficking in the black economy?

**Prof. Warren**—That is really a question for the tax office. They obviously monitor that and identify at risk areas, and that is why we have a reportable payment system and PPS, the prescribed payment system. They are always identifying at risk areas.

**CHAIR**—Do you have any comment on what ought to be done—if you make comments on these things—about tightening up areas of tax avoidance, obvious areas like those which have been mentioned in public debate—the proliferation of trusts and things of that nature?

**Prof. Warren**—I am not really qualified to enter into debate on that kind of issue. That is really a government policy issue. There are substantial changes being made.

**CHAIR**—The GST is a matter of government policy too.

**Prof. Warren**—I know, but you are pushing into a realm where I am marginal—at a marginal disadvantage.

**CHAIR**—I accept that you do not feel qualified, but if it is government policy that does not disbar you from commenting on it?

**Prof. Warren**—I think everyone should pay their fair share.

**CHAIR**—I can drink to that—and pay tax as I do!

**Prof. Warren**—What is a fair share?

**Senator MURRAY**—Can we finish this line of questioning, and move on to some modelling questions?

**CHAIR**—Yes, I just have a couple of other questions. I am aware of the hour, but I will try to be brief. Professor Warren, I think you said earlier that your support for a GST—which you declared yourself as a supporter of—was, if I took you down correctly, not because it will do anything much for economic growth or employment, but because we need it for the longer term. That is accurate, isn't it?

**Prof. Warren**—Yes, that is reasonable.

**CHAIR**—What do you think it will do for growth and employment, if anything at all?

**Prof. Warren**—Those macro benefits are marginal. That is why, I think, when you hear the discussion—and I sat in after lunch talking about the Murphy model, and you will no doubt hear from Peter Dixon—all the analysis will tell you that it is marginal. And that is reasonable if you think what you are doing is largely revenue neutral at the end of the day. There is a little bit of revenue mix change, but think of it: these models are not great at the infra-marginal stuff, so it is not surprising that you will get this washing out to be not dramatic, not big growth numbers. It is simply not going to be the case. But I re-stress that this is about integrity in tax systems, robust indirect tax systems and a concern that state tax proliferation needs to be addressed. That is a line that I have written on for too long, and I will be glad when I can stop. That, to me, is the issue, and I think it is unreasonable to say that you are going to create hundreds of thousands of jobs and that export sectors are going to boom; it is about housekeeping again.

**CHAIR**—When you say it is marginal and it is about housekeeping, how should I understand marginal in this case? Does that mean marginal negative, marginal positive, or is it just so cloudy one cannot be at all sure whether it is going to wash out as a plus or a minus?

**Prof. Warren**—You have got two people saying one plus and one minus, and they are both marginal. You have got Chris Murphy saying it is positive and Peter Dixon saying it is slightly negative, but the orders of magnitude are tiny. That is why I keep stressing that I am not surprised by those observations. That is the reality of what we are looking at.

**CHAIR**—So you are saying it is contested ground. It could be marginal negative or it could be marginal positive, depending on who you believe or what assumptions you make.

**Prof. Warren**—Yes, and also all those models close off, as Ken Henry rightly pointed out. All those models do have a limitation. To close them off, they have the long-run rate of unemployment constant.

**CHAIR**—Yes, constant.

**Prof. Warren**—After all, one of the reasons you argue this case is to improve efficiency but the paradox is that you have closed off that element of your system to prevent that from happening, and it manifests itself in higher wages as a consequence. But the issue here—I will come back to stress it again—is about having a tax system that in a sense you do not have to worry about the way we have worried about our indirect tax system for the last 20 years. That is essentially what this system does.

**CHAIR**—Just to finish the point then: albeit it is contested ground, it seems to me that those arguing for positive employment—and I do not think they were putting this up in lights as saying this is the big benefit, but they were nonetheless arguing for a positive employment effect—were saying that it is derived effectively, because you are reducing taxation on products and introducing taxation on services, and that in the wash there will be more jobs created in the manufacturing and mining sectors, which is what the Murphy model said. While there are some negatives in the services side, the balance out at the end of the day will be marginally positive. I have a problem with that proposition, very deep problems with it, in the sense that as a general comment in manufacturing and mining, which is capital intensive, the type of labour is increasingly higher skilled. In services—and this is as a general proposition not true, because there are quite high levels of skill in particular services sectors—where there is more labour intensive employment, the levels of skill are slighter, and displaced workers from that sector are not likely to qualify for higher skilled jobs in other sectors. Maybe there might be more employment, but maybe we are picking up migrants to fill it or having to expend quite large amounts of money—which I think we probably should expend anyway—on training and retraining.

**Prof. Warren**—One of the things that I always remember is the devastation FBT was supposed to wreak on the economy when introduced. It did for a short period of time, I suppose—it was supposed to impact particularly on the restaurant and that kind of sector—but how much more severe that change of policy was relative to anything like a GST.

I have heard that really what you are doing with this GST is putting a tax on services, and it is a growth sector and you are penalising that growth sector. I would have thought that with FBT you did it so much more hard than you ever did, because you came in and just did not give that deduction and then taxed it at the full top marginal tax rate. It got hit but it survived and it has gone on to flourish. There are limits to models and what they can do.

**CHAIR**—Surely, though, the fringe benefits tax applied to a certain class of clientele and related more to restaurants and car parking spaces. We are talking here about a tax that goes right across the retail sector, to which largely the FBT was untouched, and right across a range of other services that the FBT left untouched. It is much more comprehensive in its sweep, is it not?

**Prof. Warren**—Yes, and then the argument is that you have got a relative price effect going here if you continue to believe that you have a role for your indirect taxes. If you want to maintain your revenue from those indirect taxes, then ultimately you are going to have to address this issue about what you are going to do about services. In a sense, the GST is a move to broaden the base, particularly towards services. That has a large element

of inevitability about it. If that means that that service sector does not have the tax advantages that it previously had, then that is unfortunate but that is what needs to be done, because it is like saying, 'If you have got a badge, then you do not correct it because it creates a transition problem.'

**CHAIR**—I will conclude on this point and go to Senator Murray, because we are going to make you serve your full time, it appears. But that is a judgment, might I say, because, given the low levels of remuneration a lot of people in the services sector receive, taxing that sector might be regarded by some as inequitable, whereas by comparison in other sectors it might be more equitable—if you look at questions of income and remuneration, job opportunities and career opportunities for people in those sectors. I can understand it makes sense. It is a neat fit. You have got the full set of tax across the whole issue at the same rate to everyone, but everyone is not the same. People are unequal, and the old saw about taxing unequals equally perpetuating inequality is true.

**Prof. Warren**—The response to this is that you are asking the labour market and tax policy to try to indirectly carry out some kind of social policy. If you are talking about compensation, then isn't that the role of the welfare system rather than for you to try to do that through the tax system?

**CHAIR**—It may be in part the role of the welfare system, but it may not be in part. It may not be in entirety either. I am in the Labor Party, so I would believe this, wouldn't I? I would argue that the tax system is not just about efficiency; it is about redistribution of income to meet the services that the community need, and the redistributive element is important in this context.

**Prof. Warren**—My response to that is that the tax system also includes the welfare system, because that is a negative tax.

**CHAIR**—Sure.

**Prof. Warren**—Therefore, the most efficient way to design your tax in that positive and negative tax environment is to use your negative taxes to compensate those people who you want to compensate and not to use your positive taxes like your indirect tax and not necessarily your personal income tax where it has that element but to use that negative income tax component which is your social welfare system. That is targeting that is much more focused rather than using an indirect tax to try to protect people in service sectors.

**CHAIR**—We could have this debate, and we are beginning to have it. It is probably inappropriate, certainly at this hour.

**Senator MURRAY**—One area that I quizzed the Treasury on was using historical data for predicting analysis. I have assumed that where you have historical data then your predictive analysis is made probably more valid and easier as a result of experience. With the new tax system there is not that much historical data they can put in for Australia, but for the GST at least there is external historical experience. I asked the Treasury whether they had done much analysis or used the examples of the 23 OECD countries that have this system to help guide them in expectations as to what would arise in simple areas like the

black economy, the macro effects, et cetera—not simple areas but precise areas. They had not.

They have obviously read up on the material and in their material they have referred to Canada, the UK and that sort of thing. But as an overall analysis of what they could expect in certain areas, they have not done that kind of analysis. My question of you in terms of your long-term interest in this and in terms of your expertise as a modeller is: have you drawn on the VAT-GST experiences of other countries to help you arrive at your view as to what certain modelling consequences will be?

**Prof. Warren**—Yes. I was at a conference yesterday, just as the first part to your answer, with Tax Office people. Two of them were next to me earlier, Rick Matthews and Bruce Quigley. They have put a considerable amount of time into issues of not just compliance but sector impact—a quite impressive amount of information. They have literally gone around and had a look at it because they are really at the coalface, probably more so than Treasury. On the part as to international experience, there are a number of books around, some by Brookings, which look at the tax reform process as implemented in a range of different countries as to how disruptive it was and how inflationary it was. So there is reasonable literature around on the impact.

Every one is case specific, given the nature of the package and the taxes that are introduced in each one of those countries. Canada is a very bad case to look at because the legislation only passed two weeks before the tax came in. No-one thought it would get through. From what I understand, four senators were appointed and it passed and nobody expected it. Yesterday they were showing the telephone hotline in relation to what they had anticipated in the run-up to the GST. This was a chart that Rick Matthews put up yesterday, which was quite instructive. It was 80,000, 80,000 and, as soon as it passed, it went to 608,000 phone calls in a month, and it sat up there.

That is why Canada's was a mess. They also piggybacked it onto some of the states but not all of the states. So you cannot look at Canada and say Canada is a good example because in its own right it was a disaster with the way it came through parliament and was implemented and no-one was ready. Everybody hated it as a consequence because they never thought they would get it. So you have to look at every one of them case by case. Brookings do have a good book that goes through each of these countries.

**Senator MURRAY**—But in using your models, let us take an example of the flow-through effects. That seems to me an obvious one you would look for in experiential comparison. Have you taken the information from those books and said to yourself, 'When I am putting in the assumptions as to what will happen in these areas, I accept as valid the experience of such and such and such a country and I am using that experience as a guide,' because you have no other? Have you done that?

**Prof. Warren**—I read the literature. There is an OECD book called *Taxing Consumption*. There is book by Brookings called *Tax Reform*. There are a number of books around which go through how long those effects last and impact. Like I said, they vary between situations. As a rule, the Treasury is not too wrong in saying that, within 12

months, most of those effects have passed through. That is the general sentiment, but again it is a function of the environment from which it comes.

The general observation seems to be that if it is boom time then there is a certain taking advantage of. If it is a recession time, it comes through much quicker because the competition forces are very much at play and no-one wants to be put at a disadvantage. So there is no one answer. If it is a tight time, then it will come through faster than if it is a more robust stage in the economy.

**Senator MURRAY**—Are there other areas in which you have been able to apply that? For instance, I heard you use the New Zealand example on the black cash economy and capturing more people. Are there instances you have examined, for instance, dealing with the exemption area—food, financial services, education, health and all those things? Is there any of that that you have done?

**Prof. Warren**—Yes. In fact I gave a paper on food yesterday at a conference in Sydney. I would be most happy to leave a copy of that with you. That was a most entertaining presentation. It was one that you like to give because you can make your audience enjoy themselves. In fact, I enjoyed writing it, although I did not have enough time to write it. But I have attached at the back of the document two VAT notices from the UK. One is No. 70114, which is ‘What is food?’ and the other is ‘Instructions for takeaways and restaurants’. These are accessible from the Net. I downloaded them. I have turned my 20-page paper into a 50-page paper.

I went past my brief in the paper, but not in my presentation, on food. It is an issue that is very important. I went through the revenue impact; the distributional impact, so there is some distributional work in there; the compliance cost impact; how you define food and the conceptual problem when sitting at a table as to whether the food is salty, chocolate coated, hot—all these sorts of issues. What are the criteria that Canada and the UK use to define food? So I have gone through all the compliance costs. The only thing that was not in it was what Rick Matthews said yesterday—that they estimate that nearly 400,000 businesses of the 1.6 million would be affected by food being zero rated or concessionally treated. I am quite happy to leave a copy of that document with you, because it is a nice bringing together of the kinds of issues that you need to think about when you do think about what to do with food.

**Senator MURRAY**—What about the macro levels? Senator Cook was at pains to question you at some length on the consequences at the macro level. Have you done a cross-country comparison on GDP, inflation, jobs?

**Prof. Warren**—The answer is that I have not undertaken it and nobody else has really undertaken it. The reason is a fairly simple one: that tax becomes a small component in the ongoing macro-economic situation. It is extremely difficult to extract what is the package’s effect from all the other things that are happening. As you can imagine with what Bruce Murphy and Peter Dixon have said, if they are getting what they are getting and there are a whole lot of activities going on, it is extremely difficult to say, ‘Well, that is due to the package.’ The only thing you can do is look at some areas, like how many registers we got and what has happened to our tax collections. All of them say that, while this package was

introduced, like in New Zealand, the macro environment swamped, if you like, the micro changes that would manifest as macro changes.

**Senator MURRAY**—But the difficulty for this committee in appraising this package is that the Treasury have delivered what they refer to as point estimates. Other modellers that we have spoken to have said that you cannot have certainty of that kind, and the Treasury agree that the best would be a range but, for budgetary and practical purposes, they have to arrive at a point estimate. We know historically that, if you look back over budget projections and the actual end result, they are usually about three per cent to five per cent out, and that is a reasonable result given the difficulty of forecasting. But the fact is that when you are defining compensation very closely and when the government is saying, ‘The result of doing this package of things in the new tax system will make you \$24 better off and you, Mr Black Economy Unemployed Person, \$72 worse off’—I am just paraphrasing—we need to be fairly sure of where we are going.

If the consequence from overseas experience was that, in picking a 1.9 per cent or 2.5 per cent inflation figure, in general they have been out by 25 per cent, which would be 0.4 or 0.5 per cent of those, it becomes significant in the calculation as to whether the equity elements, the compensation elements, the consequences to the economy and to households are justified and are in fact warranted in terms of the way in which it is structured. I have not asked those questions out of idle curiosity, but to find out whether we should expect a standard margin of error. Did all those countries, when they introduced these things—I saw that Denmark started way back in 1967—actually underestimate the consequences in key areas? You have already indicated that New Zealand did in the cash economy area. Is the underestimation generally to the advantage or to the disadvantage of, say, the poor or those who are in tough times? That is what I am looking for. Where has the weight of experience been in terms of the effects on those income and industry groups that we are concerned with?

**Prof. Warren**—I really have to take that on notice and go back and look at the books I have. Those kind of reforms are really case specific in terms of what you are replacing. They also were in terms of what subsequently happened to those packages. Every one is very specific in terms of what happened, so I cannot really say that it has impacted on one sector or another. It is a function of what came off in the UK. A purchase tax and a selective employment tax came off and a VAT went on. Each company has something different. In Canada, it was a manufacturer sales tax. In here, it is going to be not only a wholesale sales tax but other taxes as well. You have to unpack each of them and look at the nature of the package. You need to see what comes off. In the UK, the selective employment tax was a tax on the service sector to subsidise labour in the manufacturing sector. Obviously taking that off has one particular effect combined with taking the purchase tax off.

**CHAIR**—People might argue that payroll tax is exactly that in Australia; it is the services sector subsidising the manufacturing sector.

**Prof. Warren**—Yes. The selective employment tax in the UK was even more specific. It exactly did that. It churned on that point.

**Senator MURRAY**—Since so much attention has been rightly paid to the distributional effects of this new tax system, are instances in income cameos where the margin of error is too finely tuned such that there is not a sufficient cushion for that margin of error?

**Prof. Warren**—It is a risks issue.

**Senator MURRAY**—That is right. We can only be guided by the experience of other countries, because we have no other way of doing it. That is all I have.

**CHAIR**—Do you have a final comment to make on that?

**Prof. Warren**—No.

**CHAIR**—Thank you very much for coming along. We will give you notice that we might need you to come back. That will be a matter that we will notify you about later, if we do need you. Thank you very much for your evidence and your paper. The meeting is now adjourned until 9 a.m. tomorrow.

**Committee adjourned at 5.32 p.m.**