3 Major reviews of industry assistance

In 2008, the Australian Government commissioned four major reviews which bear directly upon industry policy and industry assistance arrangements:

- a review of Australia's export policies and programs (the 'Mortimer' review) which included a separate review of the Export Markets Development Grants (EMDG) scheme;
- a review of Australia's national innovation system (the 'Cutler' review), which included a separate examination of the Cooperative Research Centre program;
- a review of the Australian automotive industry (the 'Bracks' review); and
- a review of the Australian textile, clothing and footwear industries (the 'Green' review).

These four reviews were inter-linked through requirements in the automotive and TCF reviews to have regard to innovation issues raised in the Cutler review, and to export competiveness and market access issues that were to be covered in general terms in the Mortimer review.

Collectively, the tariff and budgetary programs covered by the reviews account for more than 40 per cent of estimated Australian Government industry assistance (chapter 2).

The following sections summarise the findings of each review about the difficulties identified or shortcomings in current arrangements, the scope for change, and review recommendations. In discussing the reviews, the Commission builds on *Trade & Assistance Review 2006-07* (chapter 6) which reported on the commencement of the reviews and discussed some key requirements for ensuring the best use of Australia's scarce resources.

Other reviews conducted during 2008 that also have implications for industry assistance are discussed in chapter 4.

3.1 Review of export policies and programs

In announcing the review of export policies and programs in February 2008, the Minister for Trade stated:

> … Australian exports have underperformed in recent years. Across all major export categories, growth of export volumes in the past six years has been below the historical average since the floating of the Australian dollar in 1983…
>
> [the review] represents the Government's determination to develop an integrated approach to trade policy and ensure it is part of the broader economic policy settings … to ensure our trade performance once again becomes a strong contributor to Australia's economic performance to sustain us beyond the resources boom. (Crean 2008)

The review's terms of reference asked for an assessment of Australia's trade performance over the past two decades and ways of improving that performance, as well as an assessment of the net benefits of Australia's recent bilateral trading agreements. The scheduled 2010 review of the EMDG scheme was undertaken as part of this broader review.

The report was released on 1 September 2008.

The review characterised Australia's recent export performance as 'disappointing'. It expressed concern that a continuation of Australia's trade and current account deficits would increase Australia's net foreign debt and pose risks to Australia's economic prosperity. It also expressed concern about gaining export access in unfamiliar markets, many of which are impeded by regulatory barriers, border restrictions and policy uncertainties not generally encountered in Australia's traditional markets such as Europe and North America.

The review suggested that there was scope to enhance the productive capacity of the economy, remove domestic impediments to closer engagement with global markets, engage in negotiations to remove foreign barriers to Australian exports and investment and to increase the effectiveness of programs supporting trade and investment. To help achieve these objectives, it concluded that Australia required a new national export and investment strategy based on four pillars.

- Pillar One: improving Australia's international competitiveness — such as through improved export infrastructure (ports, roads, energy and water).
- Pillar Two: improving market access — such as through World Trade Organization (WTO) trade liberalisation, trade agreements and reductions in non-tariff barriers.
- Pillar Three: enhancing market development using export and investment facilitation programs — such as through increased funding for Austrade, EMDG and the Export Finance and Insurance Corporation (EFIC).

- Pillar Four: improving coherence and coordination between all levels of government — such as through establishment of a national trade and investment council, and a committee of officials to support the Council of Australian Governments (COAG) Ministerial Council on International Trade.

To implement this strategy the review made 73 recommendations. Pillar One deals with matters beyond the immediate focus of the *Trade & Assistance Review*. It relates more closely to the COAG national reform agenda. This reform agenda is broad ranging and covers energy, transport and infrastructure reform, regulatory reform and human capital. Reforms in these areas would be paramount in improving Australia's productivity and enhancing the nation's export performance. For example, in its Report to COAG on the potential benefits of the national reform agenda (PC 2006b), the Commission estimated that competition and regulatory reforms could raise exports by 3.7 per cent. It also estimated that human capital workforce participation and productivity reforms could have even greater impact — with estimates ranging up to a 20 per cent increase in exports over the longer term.

With respect to Pillar Two, the review affirmed that support for a strong, rules based, multilateral trading system administered through the WTO should remain a priority for Australia, notwithstanding the recognised difficulties in achieving consensus among the diverse WTO membership. It recommended that Australia remain active in WTO institutional reform.

To complement multilateral trade negotiations and institutional reform efforts, the review supported the use of bilateral and regional approaches for gaining improved market access for Australian exporters and investment. Market access issues are discussed more fully in chapter 6.

Pillar Four focuses on improving coordination between all levels of government and the potential to subsume elements of trade policy into COAG processes. Such measures are beyond the scope of this *Trade & Assistance Review*.

Elements relating to export market development programs (Pillar Three) are discussed below.

Market development

The review considered that the Australian Government's market development efforts should focus on:

- identifying and developing trade opportunities in industries in markets with 'high growth potential';

- positioning Australian companies to respond to identified market opportunities; and
- assisting business to overcome lack of knowledge about export and investment opportunities, inexperience with exporting and lack of export finance.

To support this focus, the review made recommendations, amongst other things, in relation to priorities and strategies, service delivery by Austrade and financial support to exporters.

Bilateral priorities and strategies for Australian export and investment

To help develop trade opportunities in industries with high growth potential and position companies to respond to those opportunities, the review recommended 'greater emphasis' be given to the 'strategic' setting of market development priorities and strategies. It proposed that the priorities be determined with reference to factors such as clearly identified market opportunities or customer demand, strategic competitive advantages, and a high level of industry commitment to global growth.

The judgement of the Mortimer review was that Australia's policy efforts would be best oriented to export and investment by Australian firms in the East Asian and South Asian regions and to investment in North America and Europe. At the industry level, it suggested policy efforts should focus on the development of services exports (particularly funds management and agribusiness), the pursuit of niche markets for elaborately transformed manufactures (such as automotive industry products, medical and scientific instruments, and processed food), and renewable and low-emissions energy goods, services and technologies. Further, some very specific geo-industry priorities were pinpointed — automotive products and services to the Middle East, South Africa and Russia, and mining technology services in sub-Saharan Africa and Latin America.

In addition to such perceived market and sectoral priorities, the review considered that joint government-business campaigns directed to major commercial outcomes should form part of a new export and investment strategy. Financial services, sporting services and clean energy were nominated.

Assisting exporters through Austrade

Austrade provides export and outward investment services to Australian business through a national and global network of offices. Services include: country and industry information; help identifying international partners; advice on local practices and culture; language translation; and introductions to potential buyers (box 3.1).

Box 3.1 **Austrade activities and funding**

General information to businesses is provided free of charge, while specific, tailored advice (such as export planning, logistics and marketing strategies) is charged at $190 per hour — fee revenue totalled around $30 million in 2007-08.

At 30 June 2008, Austrade's overseas network comprised 117 offices in 63 countries. Within Australia, there are 18 offices plus 50 TradeStart offices (which are partnerships between Austrade and a range of local private and public sector organisations).

For 2007-08 Austrade's public appropriation was $170 million (chapter 2). It worked directly with over 15,500 businesses. However, disaggregation according to the industries and export markets receiving government support is not publicly available.

From 1 July 2008 Austrade took responsibility for the Global Opportunities program and inward investment promotion from the industry portfolio, with an additional appropriation of approximately $10 million.

Austrade also administers the EMDG scheme.

Source: Austrade (2008).

To help enhance the effectiveness of government support to export market development by Australian firms, the Mortimer review recommended that Austrade be recognised as the focus of Australian Government export and investment facilitation. It also recommended enhanced coordination and cooperation across Australian, State and Territory governments, with particular attention to centralising overseas representation.

In addition, the review suggested that Austrade's capabilities could be enhanced, including to: assist Australian companies to form clusters, provide links to global supply chains and access to major international projects; provide advice and information to Australian business investing offshore; and undertake additional research and analysis of global trends and opportunities.

In making the recommendations for a stronger role for Austrade, the review drew attention to the flow of firms through the Austrade network and associated export activity. It reported that Austrade had worked with around 15 500 firms in 2007-08, of which over 5000 had achieved export success involving commercial export deals with a value amounting to some $22 billion. It also drew attention to the increase since 2001 in the number of exporters assisted by Austrade as well as expansion in trade negotiation related work, both without additional funding. However, the review did not provide industry and export market information on the successful activities supported, nor elaborate on the 9 000-10 000 contacts not achieving export success. It remains unclear what factors were *systematically* most or less important in success or failure, and the extent to which export success might have been achieved without Austrade's services. In the absence of convincing *causal* evidence about the effectiveness of Austrade in achieving its goals, it is not clear that expanding the role of Austrade would provide net community benefits.

Export finance assistance via EMDG

The Mortimer review identified a lack of finance as sometimes restricting the export potential of firms. It argued that there is a role for government in helping to overcome this constraint, particularly for export promotion activities of small and medium sized businesses entering export markets for the first time. The EMDG scheme was identified as the Australian Government's primary financial assistance program. It has provided export finance assistance since 1974 in the form of partial reimbursement of promotional expenses (box 3.2). Annual funding is around $150 million.

Box 3.2 **The Export Market Development Grants scheme**

The scheme was established in 1974. For the 2008-09 grant year, the EMDG will reimburse up to 50 per cent of eligible export promotion expenses above a threshold of $10 000. A scheme participant is limited to eight consecutive years of taxable grants, with a minimum grant of $5000 and not exceeding $200 000 in total. Grants are paid in two parts: an initial tranche up to a guaranteed ceiling of $40 000; and a second tranche based on remaining funding and outstanding claims. Eligibility is restricted to firms with turnover less than $50 million.

In 2007-08, expenditure on the scheme was $150.3 million. Almost 4000 grants were made — 30 per cent to first timers, averaging around $38 000. About 80 per cent of recipients were small exporters with annual income of $5 million or less. Over 60 per cent of recipients were in service industries, predominantly tourism, education, and ICT, and the top two countries targeted were the United States of America and the United Kingdom.

The Scheme has been reviewed 14 times since 1974 and numerous changes have been made to eligibility and assistance payments, although the basic construct of partial subsidisation of eligible promotional expenses has remained. Major changes include: in 1988, New Zealand was removed from the scheme as an eligible export destination because of the similarities of markets; in 1991, the grant rate was reduced from 70 per cent to 50 per cent of eligible expenses; in 1997-98, funding was budget-limited (capped); and in 2003, eligibility was shifted towards smaller and less experienced exporters.

Source: Mortimer (2008) and Austrade (2008).

As part of the Mortimer review, Mr David Mortimer AO and Dr John Edwards conducted a separate review of the EMDG. The EMDG review comprised an assessment of:

- the rationale for the scheme;
- the effectiveness of the scheme in increasing exports (additionality);
- the economy-wide efficiency of the scheme (public benefit test); and
- the provisions of the scheme, including funding, reimbursement rates, eligible activities and duration of assistance.

In accordance with the findings of the separate EMDG review, the Mortimer review recommended the continuation of EMDG, though with some tightening of eligibility criteria (discussed below).

Rationale

The EMDG review considered that the scheme rationale was to address three potential 'market failures':

- information deficiencies, such as knowledge about the general benefits of exporting and specific knowledge about suitable export markets;
- inexperience by participating firms — learning-by-doing generates productivity spillover benefits *within* the firm such as improved organisational capabilities, better managerial systems, improved skills, and a focus on quality; and
- knowledge and experience deficiencies among *non-participants* — the pioneering efforts and general experience of EMDG participants 'spill-over' to other exporters.

The Commission has reservations concerning the applicability of these rationales, particularly the first two, as a basis for government support through the scheme.

First, investments in information are part of the cost of doing business. Governments do not generally provide subsidies to businesses to reduce their operating costs. Moreover, it is not clear that a subsidy for export promotion would be appropriate to deal with lack of awareness and knowledge about the general benefits of exporting. It is also unclear that EMDG would be the most appropriate vehicle for overcoming information deficiencies, given that other programs also target such deficiencies. For example, the review consultant observed that Austrade can 'remedy many information deficiencies faced by aspiring exporters, as well as those relatively new to the activity' (Lateral Economics 2008). Similarly, Tourism

Australia provides market information, export promotion and other assistance to tourism exporters (one of the major industries supported by EMDG).

The second rationale does not address a market failure. The value of internal 'spillover' benefits gained from learning-by-doing is fully captured by the firm, and as such, firms have strong incentives to realise these gains. Such learning by doing is ubiquitous in business for almost any 'new' activity – domestic expansion, re-organisation, and major new capital purchases. Governments do not generally underwrite learning-by-doing in business.

The third rationale, external spillover benefits, is the same justification used for public support for R&D. To warrant public support it needs to be demonstrated that material export spillovers occur in practice. However, uncertainty exists about the nature and magnitude of export spillovers (see below).

More generally, the Mortimer review itself observed that the EMDG scheme seeks to address the differing needs of a wide range of exporters through a single program and that 'more tailored programs may better address identified points of market failure and exporter needs'. The review listed some options for addressing potential gaps. However, it was not clear from the review what additional costs would be entailed.

Effectiveness in inducing additional exports

Drawing on survey information and a comparison of the activities of EMDG participants and non-participants, the review concluded that the EMDG had been effective in inducing more promotional expenditure by recipients than otherwise. In turn, the additional promotional effort was estimated to generate additional (long run) exports by recipients of between $13.50 and $27 per dollar of grants.

This would appear an implausibly large response given that export promotional expenses comprise about 5 per cent of total exports costs (CIE 2005) and the EMDG scheme only partially reimburses these expenses. Moreover, concerns have been raised repeatedly about the methodology for assessing EMDG additionality, with alternative calculations suggesting substantially lower inducement (Lattimore et al. 1998, PC 2000b, Revesz and Lattimore 2001).[1] In a similar vein, the independent analysis commissioned by the Mortimer review recognised that the underlying comparison of export growth performance of grants recipients and non-recipients could be 'invalid', because it did not control for other underlying

[1] The 2008 EMDG review noted the results of Revesz and Lattimore (2001).

differences between recipients and non-recipients that have a bearing on export performance (Lateral Economics 2008, p.29).

Economy-wide efficiency

The economy-wide efficiency effects of EMDG are determined by the extent of any public spillovers beyond participants. For example, an Australian exporter may conduct market research, test markets, modify the product, establish a distribution network, and create a broader reputation of quality of Australian products. Other Australian firms may later benefit from these investments but without some of the set up costs. Wine was identified as an example of an Australian reputation for quality being established by pioneer exporters.

Quantifying the size of public spillover benefits from EMDG exports to non-participants is difficult. Therefore, rather than attempt an estimation, the review explored the comparative effects of three assumed spillover rates (0, 50 and 100 per cent). In interpreting the results, it asserted that the highest spillover rate canvassed — 100 per cent — was the 'most realistic of the scenarios'. However, other information suggests that this is likely to be optimistic (box 3.3).

Recognising the uncertainty regarding the extent and nature of EMDG public spillovers, the independent consultant for the EMDG observed that estimating the extent of EMDG-spillovers remains an area for future research. The consultant also proposed an 'export spillover impact assessment' be required in applications to help facilitate such knowledge (Lateral Economics 2008).

Scheme funding and design

The Mortimer review was concerned that current demand for the scheme exceeded available funding from government. Participants are guaranteed up to a designated amount, but remaining payments depend on residual funding. For example, in 2007-08, 22 per cent of recipients received less than 'full re-imbursement'. The EMDG review concluded that rationing of funding had created uncertainty about how much participants would receive, potentially deterring pre-commitment to trade promotion. To better align demand and supply of grants assistance, the EMDG review suggested either: increasing funding to match demand (given current eligibility criteria) or tightening the eligibility criteria so that demand is within current funding. The Mortimer review recommended the latter — cap on-going funding around $200 million — as well as reduce the number of grants from eight to five and increase the minimum threshold to $30 000 (or reduce reimbursement rates).

Box 3.3 Some cautionary considerations regarding EMDG spillovers

The nature, duration and extent of export spillovers could reasonably be expected to differ according to such factors as the export destination, the nature of the product, the particular 'pioneering barrier' that was overcome (language; regulatory compliance) and the domestic links between EMDG participants and non-participants (the precise transmission of the 'benefit'). The survey conducted for the 2008 EMDG review provides some insight into these factors. For example it found that:

- the majority of EMDG exports were to traditional markets (United States and United Kingdom);
- the main products exported by EMDG participants are tourism, education, culture, information technology and food and beverages;
- only 25 per cent of non-EMDG exporters said they had 'benefited' from EMDG exporters. (There is no break-down about the nature of these benefits, the transmission mechanism, which products or which export markets); and
- the majority of EMDG firms were experienced exporters and mostly exported identical or virtually the same products as they sell domestically.

This profile of EMDG activity suggests that the scope and extent of 'learning' and 'pioneering' spillover benefits may be more limited than assumed in the review modelling.

Other researchers use evidence on R&D spillovers as a guide to potential export spillovers. Using this method, an estimate in the range 10 to 30 per cent has been suggested as a reasonable guide to export spillovers (CIE 2005).[2]

Considering that the basic construct of the EMDG has remained unchanged since 1974, there would appear to be scope to more closely assess other design options that could improve the targeting and efficiency of the scheme (*Trade & Assistance Review* 2006-07). For example, the Cutler review of innovation (discussed below) recommended income contingent loans for the proposed Competitive Innovations Grants Scheme, while the Green review of TCF suggested consideration be given to assistance in the form of contingent loans rather than grants.

[2] The CIE (2005) was commissioned by Austrade to conduct an independent evaluation of the EMDG.

3.2 Review of the national innovation system

In announcing the review of Australia's national innovation system on 22 January 2008 (the 'Cutler review'), the Minister for Innovation, Industry, Science and Research said:

> In today's economy, innovation policy is industry policy. … In particular, we need to find ways to increase innovation performance across the economy, to ensure that business has better access to new ideas and new technologies and to bridge the divide between industry and research. (Carr 2008c)

The terms of reference asked, among other things, that the review: identify gaps and weaknesses in the Australian innovation system and develop proposals to address them; develop a set of national innovation priorities to complement the national research priorities; and examine the scope for simplifying and reducing program duplication and ensuring that any support is well-targeted and easy to access.

The final report was released on 9 September 2008.

The review's overall assessment was that 'Australian innovation seems to have slowed or even stalled in the new millennium'. In reaching this conclusion, the review referred to the slowing of Australian productivity growth since 2003 and a relative decline in government expenditure on education and public research since the mid-1990s. It also identified the drought and large increases in mining investment ahead of production as important partial explanations of the productivity slowdown.

In addition to its concern about funding of education and public research, other shortcomings it canvassed in current innovation arrangements included:

- lack of capacity of firms to acquire, absorb and apply knowledge;
- insufficient incentive provided by the suite of R&D tax concession schemes and other business support programs to overcome market failures in business R&D; and
- insufficient capacity (within firms and the public sector) to deal effectively with major environmental and climatic challenges.

To overcome the perceived shortcomings and to encourage increased innovation activity, the review proposed an 'Innovation Action Plan', comprising 72 recommendations. Some key target areas are discussed below.

Capacity of firms to be innovative

Notwithstanding evidence of substantial innovation activity in Australia over the last two decades,[3] the review considered that there is a lack of sufficient capacity among Australian firms to 'acquire, absorb and apply knowledge from science, research, and customers, in order to provide novel, distinctive, business offerings'. To address this perceived shortcoming the review recommended establishing an Innovating Enterprises program, to provide business innovation services.[4] This would be delivered in conjunction with existing business review and advisory services within the current Enterprise Connect Program.

The review also recommended another new program — Knowledge Connections — to facilitate new connections and clusters among firms. The review said 'it is not uncommon' that two firms could enhance their joint value by combining their ideas and information but do not do so because they are not aware of the other's knowledge, or the risk involved in revealing their own information to another party is too great. It considered this could be overcome through the use of trusted intermediaries and noted that this practice has spread from the United States to other countries.

Although nominating shortcomings in firms' innovative capability and clustering, the review did not explain why some firms allegedly 'fail' to acquire the necessary skills and capabilities or to cluster while other firms are apparently more successful, nor why these alleged missed opportunities would be more apparent to third parties. In the absence of such information, the Commission has doubts about the extent to which expenditure on such 'services programs' would meaningfully improve firms' innovation effort.

Human capital

Skills, knowledge and attitudes of the workforce are widely understood to be instrumental to innovation. The review expressed concern that Australia's investment in human capital had 'stalled' — for example, it referred to evidence of declining educational proficiency relative to other OECD economies. The review made three recommendations intended to improve the human capital underpinning of the innovation system:

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3 See, for example, PC (2007a, Appendix J).

4 The Review did not specify in the recommendation which specific innovation services were most needed. In the body of the Report, it suggested that business innovation success rests on such factors as an enterprise's training and skills acquisition, organisational design, marketing proficiency and specific production and managerial capabilities.

- that there be support for the human capital focus of the COAG national reform agenda and broader national education reforms, with a central focus on raising teacher quality;
- that innovation policy be aligned with immigration policies to ensure that they facilitate Australia's access to the 'global talent pool'; and
- there be a program to support provision by professional bodies of 'accelerated pathways', particularly in areas of skill shortages, for example, facilitating the entry of science and mathematics graduates into teaching.

Research capacity in universities and public bodies

The review calculated that Australian Government expenditure on science and innovation in higher education and public research bodies had fallen as a percentage of GDP from 0.49 per cent in 1993-94 to 0.32 per cent in 2007-08. It saw this as having adversely affected innovation activity and Australia's future innovation potential. To make up this gap, the review advocated the principle of full funding of university research costs,[5] restoration by 2010 of funding of public research to at least 1993-94 levels and a longer-term goal of raising the funding to match that of the top quartile of OECD economies by 2020 (currently around 0.9 per cent of GDP).[6]

In addition to perceived insufficient funding of public research, the review suggested there were structural deficiencies in the public research system in the form of insufficient incentives for collaboration and the 'endless' creation of new, duplicative research agencies and institutes. To address these concerns, it recommended there be additional funding for research bodies to engage in partnerships (including with international institutions) and for efforts to be made to avoid further fragmentation of research in areas of national challenge (namely, water, carbon emission reduction and climate change).

In respect of research infrastructure, the review considered there was a need for a coordinated, collaborative and strategic approach to research infrastructure. It recommended a successor program to the (concluded) National Collaborative Research Infrastructure Scheme for 10 years at a cost of $150-200 million per year, and for the new program to include support for the humanities, social sciences and creative arts in addition to 'hard' science.

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5 The Productivity Commission's report on *Public Support for Science and Innovation* (PC 2007a) recommended that block funding of higher education research not be further reduced.

6 Achieving the 2010 objective was estimated by the review to cost $2.2 billion. The cost to meet the 2020 target was not estimated.

R&D tax concession

The review noted the role of market competition in encouraging businesses to undertake R&D and as a stimulus to innovation more generally. It also recognised that 'spillover' benefits beyond the investing firm could result in less R&D than is socially worthwhile. Accordingly, the review confirmed a role for government initiatives to create more favourable market conditions such as through R&D subsidies.

The present suite of R&D tax concession schemes is the principal form of government support intended to induce additional business R&D. In 2007-08, assistance provided by these tax concessions totalled about $750 million. However, the review concluded that there were shortcomings with the current arrangements, particularly the decline in the after-tax benefit of the basic concession from 24.5 cents in the dollar (when introduced in 1985-86) to 7.5 cents presently. Eligibility rules that limit the use by small firms of the R&D Tax Offset, and restricted access by foreign owned firms conducting R&D in Australia were also seen as limiting effectiveness.

In response to these perceived shortcomings, the review recommended replacing the present suite of R&D tax concessions and offsets with a tax credit scheme. The key features of the proposal are:

- a *non-refundable* 40 per cent tax credit for large firms and foreign owned firms;
- a 50 per cent *refundable* tax credit for small domestic owned firms;
- the definition of small firms be lifted from those with a turnover less than $5 million to less than $50 million; and
- no minimum R&D expenditure rule.

The proposal is equivalent to a 166 per cent tax concession for small firms and 133 per cent tax concession for large firms. Expressed another way, the after-tax benefit is 20 cents in the dollar for small firms and 10 cents in the dollar for large firms. The present tax concession is worth 7.5 cents in the dollar.

The effectiveness of the tax credit proposal will depend upon the extent to which the increase in subsidy induces more R&D than in the absence of support — that is, its 'additionality'. The review predicted that the tax credit scheme would induce higher levels of expenditure by small firms, particularly smaller technology firms still in tax loss, such as in biotechnology. However, the bulk of R&D undertaken in Australia is by medium and large firms, which the review notes are quite unresponsive to changes in general R&D incentives — for example, evidence suggests that each dollar of the 125 per cent tax concession encouraged an extra

$0.10 of R&D by large firms (PC 2007a). It is therefore not clear to the Commission that the tax credit proposal would induce sufficient new R&D to justify the public cost.

The economy-wide efficiency of the tax credit proposal depends on the extent to which any additional R&D generates benefits beyond the firm that received the subsidy (spillovers). In its study of the R&D tax concession, the Commission concluded that most R&D under the present basic tax concession benefited only the recipients (PC 2007a). More generally, the Commission considered that public benefit spillovers from R&D are far less prevalent than commonly claimed. It was of the view that spillovers are more likely for basic science and novel research that triggers cycles of innovation by rivals rather than the more commercially orientated R&D efforts of many firms. It also suggested that the public benefits are greatest when there are many potential domestic beneficiaries (such as with generic technologies and/or many market participants).

In sum, in the Commission's assessment, the Cutler review's tax credit proposal has the risk of increasing the transfer of public funds to large firms for less than a proportional gain in R&D effort. The review had obtained confidential indicative costing of the proposal from Treasury, but provided no insight in its report of the broad magnitude of costs.

Other programs to support business R&D and innovation

In addition to the tax credit proposal, the review considered there was a need for what it called 'market facing programs', involving direct financial support to industry for innovation. It identified three broad streams. First, it considered there was a need to build additional capacity in firms to absorb and incorporate new knowledge. It recommended extending two existing programs in this area: Enterprise Connect (as discussed above); and a further five years for Commercialising Emerging Technologies (COMET) with at least a 25 per cent increase in funding.[7] It also recommended the creation of a new program — Competitive Innovation Grants — to assist firms, with limited access to capital, in the high-risk, proof of concept and development stages. Successful firms would be required to repay grants from the royalties or earning streams. It would seek to assist 200 firms annually at $150 million per year (average $750 000).

The second stream proposed for government action was in facilitating additional collaboration among major R&D providers — large firms, universities and publicly

[7] COMET is almost 10 years old and due to end in 2010-11. It aims to provide tailored services to early-growth stage and spin-off companies to help commercialise their innovation.

funded research agencies. To this end, it recommended that the Government act immediately on the recommendations of the parallel review of the Cooperative Research Centres Program (CRC) (O'Kane review), released in July 2008. Among other changes, the O'Kane report recommended:

- re-instating a public interest focus for the program;
- funding be injected to allow for annual rounds to take place over the next five years, so that urgent public good issues can be quickly addressed;
- encourage CRCs of varying lifespan (typically 4-7 years but up to a maximum of 10 years), with a maximum funding of $45 million over the life of a Centre;
- participation by small and medium enterprises (SMEs) and service industries be encouraged; and
- the share of public funding of any CRC be aligned to the level of likely induced social benefits; and CRC end-user applicants normally be expected to provide more than half the cash contribution towards the CRC.

The public benefit recommendation accords with the finding of the Productivity Commission in its study of public support for science and innovation (PC 2007a). The Commission study and the O'Kane review also reached similar conclusions about the deterrent effect of the complex CRC structures on the involvement of SMEs, but made somewhat different recommendations. The Commission strongly encouraged the development of smaller, shorter, more flexible arrangements between groups of firms, particularly ones that would encourage SMEs to participate. It suggested a complement to the CRC program, in the form of a pilot enhancement of the ARC Linkage program. The O'Kane review recommended participation by SMEs in CRCs be encouraged.

In November 2008, the Government introduced new CRC Guidelines based on the O'Kane and Cutler recommendations and opened an eleventh round of applications. In particular, it reinstated 'public good' benefits (social and environmental) as a key objective. Nevertheless, it adopted a slightly different funding model to O'Kane's recommendation. Funding will now be provided for varying periods up to 10 years, without an upper dollar limit and, in exceptional circumstances, further funding up to 15 years will be available. As a means of encouraging SMEs, the Guidelines included a requirement that each CRC must include strategies that build SME innovation and/or R&D capacity.

While the CRC is the major collaborative program, the Cutler review saw a need for a range of other collaboration and linkage programs to fulfil roles not covered by the CRC. Other current programs include: the Industry Cooperative Innovation Program; rural R&D corporations; Australian Research Council programs (Centres of Excellence, the Research networks and ARC Linkages Grants); National Health and Medical Research Council program grants; and state and territory programs. It did however, identify what it saw as a gap in the collaborative framework regarding the take-up of ready-to-go-knowledge. To fill this gap, it recommended the creation of an Innovation Voucher Scheme to support SMEs to submit research questions to the research community. It proposed each voucher would be worth up to $15 000 and the scheme would support 5000 firms per year at a cost of $50-$70 million per year.

The third broad stream identified for government action was in facilitating financial capital availability. It asserted that ‘there is a global and systematic funding gap in the availability of finance for early stage ventures and small technology business’. To boost venture capital availability in Australia, it recommended expansion of two current programs that support capital raising by early stage companies — the Innovation Investment Fund Program and Pre-Seed Fund program — at an estimated cost of $400 million over 15 years. The Commission had previously reported that these schemes generally deliver high rates of assistance compared with other R&D schemes (PC 2007a). The review also recommended there be new strategies to attract international venture capital to Australia.

If implemented in full, the review’s recommendations would significantly increase both the number of programs and budgetary cost of business R&D and innovation programs. However, a concern of the government when announcing the review was the already ‘bewildering array’ of programs and the scope to ‘streamline these programs, reducing fragmentation and improving effectiveness’ (Carr 2008c).

National innovation priorities

The Cutler review was also asked to develop a set of national *innovation* priorities to complement the National Research Priorities. In response, the panel outlined five principles for determining such priorities, including leveraging Australia’s natural endowments, and targeting areas where there is a distinctively Australian challenge or an advantage. It proposed two sets of national priorities:

- where the government itself can take a leadership role in innovation — agriculture and food security; climate change mitigation and adaption, population health, tropical solutions, and broadband applications; and
- where government stimulus can increase the returns to private innovative activity — resource industries, space and astronomy, finance and risk management; and marine industries.

The review noted significant overlap between these nominated *innovation* priorities and the existing National Research Priorities and the consequent need to manage and coordinate the respective priorities.

General principles for intervention, design and evaluation of innovation programs

Besides the many specific recommendations regarding new and existing innovation programs, the Cutler review addressed a number of more general issues such as general design principles for innovation programs and program review.

With regard to government intervention, the review said

> Taxpayers demand that their money is well spent, so when it is proposed that a program of public spending or the provision of subsidies should be undertaken, a clear case has to be made. (Cutler 2008, p.37)

The review identified and explored the in-principle 'market failure' case for government programs for R&D and innovation. It proceeded to explain that 'once a case has been made successfully for public intervention in the national innovation system, it is crucial that program design be addressed carefully following key principles'.

The principles the review outlined are similar to those identified in previous reviews and relate to problem identification, inducement and behavioural change, program eligibility and duration, interaction with other programs, administration efficiency and accountability. The difficulty has been in their practical application — in particular, identifying genuine market failures, distinguishing between public and private benefits, and meaningfully assessing the inducement effects of government interventions (PC 2008c).

In regard to evaluation, monitoring and reporting, the review was concerned that only 36 percent of innovation programs have subsequently been reviewed and many have unclear and/or unmeasurable key performance indicators. It recommended there be a rigorous policy of evaluating all Australian Government innovation programs and other relevant programs. Moreover, it saw a need for pre-evaluation 'ground work' when programs were being established, such as setting forth evaluation criteria, collection of base line data, provision for ongoing performance data and commitment to transparency in reporting. Finally, it recommended the review function be 'arms-length' from the administering body and transparent. Indeed, such processes are crucial to good public policy (PC 2008c).

3.3 Review of the automotive industry

Although assistance to motor vehicle producers and components suppliers has declined significantly since the mid-1980s, the automotive industry remains among the most highly assisted manufacturing industries (chapter 2). Its assistance derives largely from long-standing tariffs and budgetary support, particularly through the Automotive Competitiveness and Investment Scheme (ACIS).

Although tariffs and ACIS are the dominant forms of assistance, the local sector also derives significant advantages from periodic firm-specific assistance by both Australian and state governments, as well as Government procurement programs, a luxury car tax (which falls mostly on imported vehicles) and a $12 000 tariff on imported second-hand vehicles.

In announcing the review of the automotive industry on 14 February 2008, the Minister for Innovation, Industry, Science and Research said:

> The automotive industry is strategically vital to Australia in terms of employment, exports and innovation. … The review will assist laying down a new set of principles to make the industry sustainable into the future. (Carr 2008a)

The terms of reference required, among other things, an assessment of the challenges and opportunities currently facing the sector, an evaluation of the key outcomes of the ACIS, and an assessment of the legislated passenger motor vehicle tariff reductions. Regarding innovation, the review was asked to make recommendations on the delivery of the Government's Green Car Innovation Fund, as well as other measures to boost innovation in the sector, and to have regard to the issues raised in the concurrent review of Australia's national innovation system (the 'Cutler review').

The Government also separately requested the Productivity Commission to undertake modelling of the economy-wide effects of future assistance options identified by the Bracks review. The Commission's study was released in May 2008 (PC 2008d).

In August 2008, the Government released the final report of the Bracks review and the Government responded to the recommendations in November 2008.

The Bracks review was the latest in a series that had previously been undertaken by the Productivity Commission or its predecessors. The reviews have been conducted about every five years and timed to be completed before the scheduled reductions in assistance in place at the time (IAC 1981; IC 1990; IC 1997a; PC 2002b). The present review, headed by the former Premier of Victoria and comprising a panel including current and former automotive industry and union representatives, supported by a departmental secretariat, was conducted in advance of scheduled reductions in 2010 of automotive tariffs from 10 per cent to 5 per cent and a concurrent move from Stage 2 to Stage 3 of ACIS.

The review found that although relatively high levels of assistance have been provided to the Australian sector, local automotive businesses have, in recent years, been under considerable commercial pressure. This has culminated in reported trading losses for vehicle manufacturers amounting to 8.6 per cent of sales in 2007.

A relatively large appreciation of the Australian dollar against the US dollar over the period since the 2002 review was identified as a key source of this commercial pressure. At the same time, inefficiencies in the components sector arising from fragmented small scale operations, inadequate quality and disruptions in supply have added to the cost of local vehicle manufacturers. In addition to these broad economic and cost pressures, there has been a shift in consumer preferences towards smaller vehicles and sports utility vehicles and away from medium and larger cars traditionally manufactured in Australia. Cleaner emissions requirements have further added to development costs.

Regarding future commercial opportunities, the review considered there was increased export potential in both established markets (such as the Middle East) and emerging markets (such as China, Russia and India). The shift of consumer preferences towards low fuel consumption was also considered to be an 'opportunity' for local vehicle manufacturers to find a niche in the medium to large car segment with alternative fuel and drive-train technologies. Increasing global supply chain integration was identified by the review as an opportunity for the local components suppliers to diversify and invest in foreign markets.

Recommended future assistance arrangements

The review made 42 recommendations, covering industry-specific assistance as well as broader matters such as trade agreements, emissions trading, taxation, and vehicle safety. The assistance recommendations are outlined below.

Continuation of scheduled tariff reductions

The review recommended continued reductions in import tariffs, as planned, from 10 per cent to 5 per cent in 2010. The review said that a reduction in tariffs 'would continue the structural adjustment process the industry had been undergoing since the mid-1980s'. Drawing on the PC's modelling report, the review noted that a reduction in Australia's automotive tariffs from 10 per cent to 5 cent could provide net benefits to the economy of around $0.5 billion a year with gains to consumers and other industries outweighing negative impacts on the automotive industry.

The review noted the modelling by the Commission illustrated that significant appreciation (or depreciation) of the Australian dollar against major trading currencies would have a much greater adverse (or positive) effect on the automotive industry than the scheduled tariff reductions.

Replacement of ACIS with a longer and larger transitional assistance scheme

ACIS commenced in January 2001 and was initially scheduled to end in December 2005. It was intended to provide transitional assistance and encourage competitive investment in the context of trade liberalisation. Tariffs had been reduced by 2.5 percentage points each year since 1990, starting from 40 per cent, until frozen at 15 per cent in 2000. Although ACIS was intended to be a transitional program to help secure industry change (during the five year tariff pause), it was designed to deliver around the same quantum of assistance as the scheme it replaced — the Export Facilitation Scheme — which had been vulnerable to challenge under the WTO as a prohibited export subsidy.

In December 2002, the Government announced that ACIS would continue beyond 2005 through to 2015, with some revision of arrangements, and some increase in total assistance available.

The ACIS subsidises three categories of activity — production, investment and R&D. The maximum rate of subsidy is different for each category and there are some differences between rates for vehicle producers and supply chain businesses. Much of the assistance available is 'capped' and has necessitated 'modulation' (or rationing) each year with average payout rates being about three–quarters of the maximum subsidy rate. Assistance is accrued in the form of import duty credits rather than cash.

The review concluded that ACIS had been effective in inducing additional production, investment and R&D than would otherwise have occurred. The Commission has noted that some additionality could be expected given the relatively large rate of subsidy (PC 2002b). What is less clear from the Bracks review is guidance on the relative magnitude of the separate inducement effects on production, R&D and plant and equipment by vehicle producer and components businesses. However, quantitative assessment of 'additionality' effects is severely hampered by the lack of publicly available data on ACIS funded production, plant and equipment and R&D (ANAO 2008).

Based on its assessment of the commercial environment facing the Australian automotive industry, and the view that R&D should be boosted further, the review elected to recommend further extension of transitional assistance through to 2020. It proposed replacing ACIS with a new program — the Global Automotive Transition Scheme (GATS) — to commence in 2010 rather than proceed with ACIS through to 2015. It nominated funding be increased to $1.5 billion from $1.0 billion under ACIS over the period 2010 to 2015 and that a further $1.0 billion be provided over the period 2016 to 2020 (with the latter front-loaded and reducing to zero over the five-year period).

It was also proposed that the design of GATS differ in some important respects to that of ACIS. First, assistance should be in the form of grants rather than import duty credits. This is intended to address concerns about 'non-neutrality' regarding sources of imports and some leakage of duty credits to brokers.

Second, the maximum rate of assistance for eligible R&D should be increased from 45 per cent under ACIS to 50 per cent, while the rate of claims for plant and equipment would be reduced from 25 per cent to 15 per cent. The increase in the R&D subsidy rate by 5 cents in the dollar is intended to address the review's concern that aggregate automotive industry R&D has plateaued in recent years — sectoral growth in R&D averaged more than 18 per cent per year from 1999-2000 to 2002-03, but only 2 per cent per year thereafter. The review speculated that the 'flattening' of R&D growth may be partly due to the lumpiness of R&D expenditure and international competition for investment in an R&D intensive industry.

Under GATS, automotive production would continue to earn assistance, similar to that provided under ACIS.[8] The review said vehicle producers should continue to receive production assistance, in addition to support for R&D and investment activity, as this would help smooth out the flow of payments available under GATS to firms. (Information on the 'smoothness' of ACIS assistance is not publicly available.)

Bringing forward and doubling of the Green Car Innovation Fund

Prior to the review, the Australian Government had committed to introducing a $500 million Green Car Innovation Fund (GCIF) in 2011 and in June 2008 the Government announced a $35 million grant from the Fund to Toyota to assist the manufacture of a hybrid petrol-electric Toyota Camry in Australia.

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[8] The Review does not specify a production subsidy rate. Under the capped component of ACIS, duty credits on eligible production are calculated as 25 per cent of the production value, times the tariff rate. Thus, at a 10 per cent tariff rate the subsidy is 2.5 per cent of the value. The Bracks review recommended partial uncapping of production credits.

In order to help the Australian industry gain early commercial opportunities in ‘green car’ development, the review recommended bringing forward commencement of the GCIF to 2009 from its scheduled 2011 start. Further, it recommended that if the Fund proved successful in the first two years, funding should be doubled from the planned $500 million to $1 billion and extended beyond its initial five years.[9] It also suggested the planned 1:3 government-industry funding ratio could be varied on a case-by-case basis in order to accommodate technological and commercial risk profiles of proposals which may vary considerably. However, exercising this discretion effectively would require government officials to have very detailed knowledge.

For the purposes of its modelling report, the Commission considered whether assisting ‘green car’ production was likely to result in either innovation spillovers or lower greenhouse emissions (PC 2008d). It noted that the GCIF would be likely to encourage some buyers to switch from taxed, more efficiently produced imported hybrid and fuel-efficient vehicles to subsidised, higher cost, locally-produced ones — without necessarily increasing ‘green car’ sales overall.

Additional short term adjustment assistance for the components sector

Another important recommendation was for a short-term restructure fund to further assist the local supply chain to ‘improve economies of scale, enhance management capabilities, and internationalise production to build capacity and demand.’ As a guide, the review proposed Government funding be in the range $60 to $80 million over a two year period. It proposed that payments be determined on a case-by-case basis by the responsible Minister, taking into account such matters as facilitating mergers and fair and reasonable adjustment assistance for displaced employees.

Government response

In its response to the review, the Government announced a $6.2 billion assistance package for the automotive industry between 2009 and 2021 — *A New Car Plan for a Greener Future* (box 3.4). This represents new commitments of $3.2 billion additional to the $3.0 billion expected to have been spent in the remaining stages of ACIS.

[9] The review, however, did not outline how success could be or would be judged over the two year period. Indeed, it observed that the full benefits of the initiatives supported by the Fund may not be evidenced for some years after the support is provided.

Although the Government's industry assistance plan broadly aligns with the recommendations of the review, there are some key differences:

- The replacement for ACIS, to be known as the Automotive Transformation Scheme (ATS), will provide $3.4 billion, compared with $2.5 billion recommended by the review, and will start a year later (2011).
- Additional funding of $80 million will be provided to assist the transition from ACIS to ATS during 2010.
- The Green Car Innovation Fund will be increased to $1.3 billion and will run for 10 years, starting in 2009.
- An Automotive Industry Structural Adjustment Program (AISAP) will provide $116.3 million to facilitate consolidation in the components sector by helping firms with legal, relocation and other merger costs and labour market adjustment.

Box 3.4 **The *'New Car Plan for a Green Future'***

Tariffs — cut from 10 per cent to 5 per cent on 1 January 2010 as per previously announced tariff phasing arrangements.

Automotive Competitiveness and Investment Scheme (ACIS) — replaced by a $3.4 billion Automotive Transformation Scheme (ATS) to run from 2011 to 2020. Transition assistance of around $80 million towards changing from ACIS to ATS will be provided in 2010.

Green Car Innovation Fund — expanded to $1.3 billion, based on matching $1 for $3 expenditure by industry, over 10 years, from 2009.

Structural adjustment in the supply sector — $116.3 million to promote structural adjustment through consolidation in the components sector and to facilitate labour market adjustment.

Suppliers capability — $20 million over 2009 and 2010 to help suppliers improve their capabilities and integrate into national and global supply chains.

Export market access — $6.3 million from 2009-10 for an enhanced sector-specific market access program.

Institutional — a new Automotive Industry Innovation Council to bring key decision makers together to drive innovation and reform.

LPG — $10.5 million expansion of the LPG vehicle scheme through doubling of payments for purchases of new vehicles using LPG technology from $1000 to $2000.

Other recommendations related to the treatment of transport in emissions trading rules, safety design rules, government vehicle purchasing policies, fringe benefits tax, State government investment incentives and State and Territory vehicle-related taxation.

Source: Australian Government (2008b).

3.4 Review of the textiles, clothing and footwear industries

As with the automotive industry, assistance to TCF industries has declined significantly since the mid-1980s, yet the estimated effective rate of assistance remains more than twice the average for manufacturing industries (chapter 2). Import tariffs confer about three quarters of the estimated assistance with budgetary assistance, principally the TCF Strategic Investment Program (TCF SIP), accounting for the remainder. Australia is reportedly one of the few countries to provide sector-specific budgetary assistance to TCF firms (Green 2008).

Although import tariffs and SIP are the dominant sources of assistance to the local sector, other assistance includes additional sector-specific funding within the TCF Post-2005 Assistance Package, tax concessions and grants through generally available R&D programs and exports marketing grants.

In announcing the review of the TCF industry on 8 March 2008, the Minister for Innovation, Industry, Science and Research said:

> The TCF industries have an important role to play in Australia's economic and social future. ... [The review's] task will be to develop practical and effective strategies to ensure Australia's TCF industries will be vibrant, innovative and competitive well into the future. (Carr 2008b)

The terms of reference required, among other things, an evaluation of the appropriateness and effectiveness of tariff and sector-specific budgetary assistance, the adequacy of existing structural adjustment assistance, and the scope for the industry to take advantage of research and development, new technologies and innovation in textiles and design. The review was also to have regard to the issues raised in the concurrent Cutler review of Australia's innovation system.

The Government also separately requested the Productivity Commission to undertake modelling of the economy-wide effects of future assistance options identified by the Green review. The Commission's study was released in June 2008 (PC 2008e).

In September 2008, the Government released the report of the Green review — *Building Innovative Capability: Review of the Australian Textiles, Clothing and Footwear Industries*. The Government has yet to respond to the review and the Post-2005 Assistance Package remains in place (box 3.5).

As in the case of automotive assistance, the recent review was the latest in a series (IAC 1980; IAC 1986; IC 1997b; PC 2003). The present review, headed by the Dean of the Macquarie Graduate School of Management, with an advisory panel comprising industry and union representatives and academics, supported by a departmental secretariat, was conducted in advance of scheduled reductions in 2010 of tariffs on imported TCF products and cessation of TCF SIP eligibility in 2010, other than for clothing and finished textiles.

Box 3.5 **TCF post-2005 Assistance Package**

The $747 million TCF Post-2005 Assistance Package followed the $687 million TCF Post-2000 Assistance Package. The 2005 arrangements were to operate to 2015.

Import tariffs

Since 1 January 2005, the Australian import tariffs (Most Favoured Nation basis) for clothing and finished textiles — the bulk of imports — has been 17.5 per cent. Under present arrangements this will reduce to 10 per cent on 1 January 2010 and to 5 per cent on 1 January 2015.

Tariffs for other textile products presently range from 5 per cent to 10 per cent. From 1 January 2010 all these tariffs will be 5 per cent.

TCF-specific post-2005 budgetary assistance

The post-2005 assistance package provides for funding of $747 million over 10 years (2005 to 2015), comprising six programs:

- *TCF Post-2005 Strategic Investment Program (TCF SIP)* — $575 million available for subsidies of up to 40 cents in the dollar for eligible capital expenditure and up to 80 cents in the dollar for eligible R&D. All TCF industries are eligible up to 2010 but only clothing and finished textile businesses thereafter.
- *TCF Structural Adjustment Program (TCF SAP)* — $50 million to support industry consolidation and labour market adjustment.
- *TCF Small Business Program (TCF SBP)* — $25 million in competitive grants to improve the business culture of small TCF businesses.
- *TCF Product Diversification Scheme (TCF PDS)* — $50 million to internationalise sourcing and to complement product range. Support is in the form of import duty credits earned on incremental production.
- *TCF Expanded Overseas Assembly Provisions Scheme (TCF EOAPS)* — $27 million in import duty concessions for importation of overseas assembly of predominantly Australian made fabric or leather.
- *TCF Supply Chain Opportunities Program (TCF SOP)* — $20 million in competitive grants for capital investment.

The review identified several sources of commercial pressure facing the Australian TCF industries. Foremost, as in other developed economies, was competition from suppliers in developing economies in low-cost, high-volume market segments. Other commercial challenges included constant pressure for creative design and value-added fashion products, continual downward pressure in prices particularly from large retailers and difficulty of some Australian SMEs linking into global supply chains.

Despite the testing trading environment, the review considered that the Australian TCF industries have a ‘promising future providing they deliver products that are differentiated from those of competitors by their uniqueness, product quality, design and branding’.

Recommended future assistance arrangements

The review made a total of 15 recommendations covering both industry-specific assistance and other matters such as industrial relations for home based workers, ethical standards relating to labour, environment and animal welfare and national sizing standards. The industry assistance recommendations are outlined below.

Continuation of scheduled tariff reductions

The review considered that tariff protection was a blunt instrument for the promotion of innovation and competitive capability at the enterprise level and recommended that the scheduled tariff reductions should be allowed to take their course through to 2015. Drawing on the Productivity Commission’s modelling report, the review noted that the scheduled reduction in Australia’s TCF tariffs in 2010 and 2015 could provide net benefits to the economy of around $60 million per year with gains to consumers and other industries outweighing negative impacts on the TCF industry.

The Commission’s modelling further indicated that exchange rate variations due to factors outside the control of TCF industries (such as changes in the world price of Australia’s mineral exports) were likely to have a larger impact on sector prospects than the impact of scheduled tariff reductions (PC 2008e).

Replacement of the present transitional package with a TCF Innovation Assistance Package

In accordance with the terms of reference, the review examined the effectiveness of the existing six budgetary assistance programs. Regarding the principal program, TCF SIP, it observed that eligible industry expenditure in 2000-01 (at the commencement of the ‘first’ SIP) was approximately double the 1998-99 level, with little further growth in total expenditure in the last seven years. It also observed that eligible innovation-related business expenditure had increased from about 25 per cent of total eligible expenditure to about 50 per cent.

Looking back, the review concluded that SIP had focussed TCF firms on repositioning themselves in the changing operating environment rather than focussing on protectionist assistance and had facilitated structural adjustment and the survival of many firms in the TCF industries. However, looking forward, the review was of the view that SIP had 'reached the limits of its rationale and has been superseded by the increasing emphasis on innovation by industry, design and creativity as key sources of competitive advantage'.

The review's assessment of the other five programs within the Post-2005 Package was mixed:

- It concluded that the restructuring initiative grant scheme (TCF SAP) does not appear strategically focussed on initiatives that would take the industry forward in a meaningful way — for example, requiring one participant in a merger to be unviable does little to establish confidence that the scheme will benefit the industry. It was also assessed to be cumbersome and to involve high compliance costs. Similarly, the review found that the product diversification program (TCF PDS) was problematic in that it had only engaged a small number of firms, and did little to encourage innovation, skills enhancement, supply chain initiatives or other issues identified by the review as vital to the ongoing future of the TCF industries.
- In contrast, it concluded that the small business program (TCF SBP) had facilitated strategic business improvement and the development of entrepreneurial culture[10] and that the overseas assembly program (TCF EOAPS) was achieving its policy objective. (The supply chain program had not commenced at the time of the review.)

Overall, the review concluded that current assistance arrangements were 'not tuned' to where the TCF industries needed to head. It recommended there should be a change in the focus of industry assistance away from the more traditional structural adjustment forms of support towards a greater emphasis on building innovative capacity at the enterprise and workplace level. Specifically, it recommended the existing transition assistance be superseded by a new TCF Innovation Assistance Package 2009-2015 with a budget of $250 million. This is broadly the amount of

[10] There has been three rounds to date. The review provides a disaggregation of expenditure, based on unpublished data, including the completion rate of projects and examples of project outcomes.

residual funding that would be left from the $575 million TCF SIP allocation, after 30 June 2009.[11]

The cornerstone of the package would be a $200 million TCF Innovation Capability Program (TCF ICP), to be available to applicants on a contestable basis. The review recommended certain eligibility and merit assessment rules apply:

- five basic eligibility criteria comprising value-adding, ethical production, additionality, employee involvement in change projects, and accountability for delivery of project aims (recommendation 6); and
- seven operational criteria (funding categories), including for innovation capability, collaboration, accessing global opportunities, high performance work and management systems, and environmentally sustainable and ethical practices (recommendation 7).

The funding category priorities would be reviewed from time to time via the TCF Innovation Council as well as guided at a higher level by the general framework for innovation priority setting in accordance with the recommendations of the Cutler review.

It also recommended that $15 million of the $200 million be specifically for small and micro businesses and that priorities for the ICP include R&D performance and training and skills (recommendations 12 and 13).

Although such multiple rules reflect a desire to target support at activities deemed to be in the long term interests of the industry, there is a risk that such compartmentalisation may unduly limit support for worthwhile projects or encourage businesses to 'distort' applications towards categories where they may be more likely to receive funding.

There is a further risk that grants may provide assistance for projects that are commercially viable and would have been undertaken in the normal course of business (that is, additionality may be very low). The review itself suggested consideration be given to income-contingent loans, which may be a more efficient means of providing government support. More generally, the proposed eligibility rules do not appear to rule out proposals by firms that have successfully transformed

[11] Cumulative assistance via TCF SIP (post-2005) for 2006-07 and 2007-08 was about $193.7 million (appendix A, table A.1). If expenditure in 2008-09 is of a similar magnitude to each of the first two years, cumulative expenditure would be about $295 million, leaving a residual of around $280 million.

under current arrangements — and are inconsistent with the rationale for 'special' innovation transition assistance.[12]

Other assistance recommendations

In relation to innovation, the review also recommended the establishment of a TCF Innovation Council ($12 million) and broadening the definition of TCF industries to include collaborating activities such as fashion and accessories, design, research, technology, branding and supply chain management.

Other recommendations with notable implications for industry assistance include:

- continuation of assistance to retrenched workers under the existing Structural Adjustment Program (Part 1) through to 2015 with funding of $25 million — the current program is demand driven and has assisted 946 retrenched workers at a cost of $3 million in the period 2005-2008;
- use of Government procurement policy to foster capability building of TCF firms;[13] and
- additional funding for the business advisory services of Enterprise Connect to permit a specific TCF focus.

3.5 Summing up

The four reviews collectively made over 200 recommendations. These not only addressed industry assistance arrangements such as tariffs, subsidies, and trade agreements, they also touched on broader issues pertaining to industry performance, including public education, environmental regulation, industrial relations and government procurement.

Broadly, each review addressed three questions: is there a role for government in certain areas; how well were existing arrangements operating; and how can better outcomes be achieved? Each review included a public submission process and the

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[12] Textor was described by the review as an example of a firm that had successfully transformed under TCF transition assistance from a precarious financial position in 2000 to one that will be debt free and financially sustainable by 2010. The review particularly noted 'Textor has been aware that the incentives would cease in June 2010'.

[13] Depending upon how this is implemented, there is a danger that such support would be considered a trade barrier. For example, the review itself considered that the US Berry Amendment (which excludes Australian TCF firms from the US defence apparel procurement market) was an unfair and unjustified trade barrier and should be raised with negotiators in the context of the Australia-US Free Trade Agreement.

public release of a final report (though not of a draft report to enable public scrutiny of proposals).

All four identified productivity improvement as a high level goal for Australia because of its role in improving living standards, with innovation being instrumental in achieving productivity growth. Each review also recognised the effect of market forces in efficient resource use and encouraging productivity improving innovation.

At the same time, all the reviews identified a potential role for government in overcoming market failures. The range of 'failures' identified by the reviews included: lack of capital for innovation and exporting; lack of information about export markets; inexperience in exporting; lack of innovation capability in small firms; and foregone public spillover benefits from R&D because of insufficient incentive to conduct private R&D. However, the substance of such claims varies across the reviews with the existence of some alleged failures not adequately demonstrated or supported. To the extent that programs do not target demonstrable market failures, they are unlikely to yield a net payoff to the community as a whole, even though they may benefit the recipients.

Market failure aside, the four reviews also favoured a role for government in strategic priority setting, for example, identifying prospective export markets and goods and services on which to concentrate government efforts, setting national innovation priorities, ensuring long-term manufacturing of certain products and the establishment of industry councils to 'guide' the future. Proposed eligibility and merit assessment criteria for grant programs also have an element of picking 'desirable' activities, rather than being focussed principally on removing impediments to efficient decision making by firms or promoting demonstrable public spillover benefits.

Across the four reviews, the depth of the analysis of the effectiveness of existing assistance programs varies and a general problem confronting the assessments is lack of availability of appropriate data. In the case of TCF and the automotive industries, no clear picture emerges about how effective assistance has been over the last five years in moving these activities closer to 'economic sustainability', despite proposals to continue or extend substantial sector-specific support to these activities. In regard to R&D and export subsidies, the claimed size of the inducement effects and the nature and extent of public spillover benefits appear optimistic.

The Commission's preliminary assessment is that the overall level of industry assistance would rise significantly with the full implementation of the various review recommendations, with higher government spending outweighing the assistance reducing effects of recommended tariff reductions in the automotive and TCF industries.

Concerning the more highly assisted automotive and TCF industries, both have had similar transition assistance packages for about a decade based on subsidies for production, investment and R&D. However, the Commission notes that the respective reviews recommended somewhat different approaches to future assistance arrangements. For the automotive industry, the Bracks review recommended (and the government decision strengthened) further extension of subsidies for production, plant and equipment and R&D. In contrast, the Green review of the TCF industries concluded that current budgetary assistance support arrangements were no longer suited to the future directions of the TCF industries. It recommended instead a competitive based innovation assistance program, costing about the same as expected expenditure under current arrangements, with the same sunset date as under current arrangements.

While each of the reviews sought to raise productivity and living standards through more effective and efficient industry assistance arrangements, the Commission has reservations about the assessment of the rationales for and the potential net benefits of some programs. Future assessments would be enhanced by the generation of data about industry assistance program participation, the provision of measurable performance benchmarks for individual programs and how the programs change economic outcomes against those benchmarks.