Setting the Scene
Monitoring Micro Reform

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Contents

List of Figures

List of Tables

List of Boxes

Executive summary

This is the first in a series of BIE reports designed to monitor the impact of microeconomic reform on firms and industries. This report aims to set the scene as well as outline the BIE's thoughts about future work in the area. It takes stock of some key elements of the microeconomic reform process. It also discusses, at a conceptual level, the way in which microeconomic reform is likely to impact on Australian firms and industries. Finally, it identifies how the BIE's future monitoring work will add value to our existing stock of knowledge.

Prior to the 1980s, the term 'microeconomic reform' was virtually unheard of in Australia and macroeconomic policies featured predominantly on governments' agendas. Since the mid 1980s, however, microeconomic reform has become a priority for all tiers of government.

The microeconomic reform process is not an end in itself. The process aims to increase Australia's standard of living by getting the economy's incentive structure right at the grass roots level. Key elements of Australia's microeconomic reform agenda include: trade liberalisation and other rationalisations of industry assistance; infrastructure reform; industrial relations and workplace reform; and regulatory reform, including reforms to competition policy.

The major conclusion emerging from economy-wide modelling studies of microeconomic reform is that the estimated effects are positive, widespread and on-going. However, the reform process is not costless. In contrast to the benefits, the adjustment costs of reform such as redundancies, firm closures and unemployment, are typically experienced early in the reform process and are relatively concentrated. At the same time, many firms will be able to take advantage of cost reductions and opportunities that arise as a result of the reform process. Hence the overall impact of microeconomic reform on particular industries and firms is not always clear. The BIE's monitoring microeconomic reform project will help shed light on the effect of reform on individual firms (managers and workers) and industries. Case studies will be a key analytical tool for this purpose.

Developments in three key areas

This report looks at how the process of microeconomic reform evolved in Australia. It highlights some of the more significant events in the reform process. To varying degrees reforms have taken place in all sectors of the economy — agriculture, mining, manufacturing, private sector services and public sector services. They have influenced capital formation, human resources and training, industry development, regulation and taxation. The report reviews reforms in three key areas — trade liberalisation, infrastructure, and industrial relations and workplace reform.

Trade liberalisation and the associated process of rationalising assistance to Australian industries have progressed well. Indeed, Australia will be one of the most open economies in the world by the turn of the century. Nevertheless, some manufacturing and agricultural industries receive rates of assistance above the relevant sectoral averages.

Reforms in this area have highlighted the need for, and importance of, progressing microeconomic reforms in other areas. Governments have recognised that broader reforms are an essential element of the task of building an economy which can compete successfully at an international level.

Infrastructure reform has lifted the performance of government business enterprises (GBEs). However, performance varies considerably between industries and between GBEs within industries. In some instances, the reform process has led to substantial reductions in prices and improvements in the quality of infrastructure services. Electricity and telecommunications fall into this category. In other instances, for example water supply, reforms to remove cross subsidies or the under-recovery of efficient costs has sometimes led to price increases, for all or some customer classes. In yet other instances, progress towards greater efficiency and lower costs has been uneven. Some areas of the waterfront fall into this category.

The experience so far suggests that reform of infrastructure is a complicated process. In some cases, it involves the letting loose of potential monopolies. If not adequately controlled, this can lead to infrastructure owners reaping all the benefits of reform as monopoly dividends. The incentive for infrastructure owners to monopoly price can be even more of a concern if the owners, in many cases state governments, have limited alternative avenues to raise revenue. Although many infrastructure service providers performance — in terms of price, quality and productivity — has improved, many still fall short of achievable world best practice. Australia's process of infrastructure reform is not being undertaken in isolation, prices elsewhere in the world have also trended downwards, in some cases at a faster rate. In a number of areas (e.g. waterfront charges for coal handling and road freight rates) Australia's prices are at or near world best practice. As the costs and quality of infrastructure services impact on the competitiveness of Australian industry, it is essential that the momentum towards efficient pricing and delivery is maintained. Vigorous implementation of the National Competition Policy will be important in achieving that aim.

There have been important and substantial reforms to *industrial relations and workplaces* over the last decade or so. The centralised industrial relations system is progressively developing a more decentralised focus with the growth of enterprise bargaining. Firms — managers and workers — now have greater autonomy and flexibility in organising, training and rewarding their efforts at the enterprise level. There is some firm-level evidence to indicate that enterprise agreements may be contributing to increases in productivity. For example, the first 1 000 enterprise agreements ratified by the Australian Industrial Relations Commission contained a

wide range of initiatives which will enhance productivity. Agreements formalised since the introduction of the Reform Act amendments have continued this trend. The potential for enterprise agreements to enhance productivity is supported by survey data which indicates that managers in workplaces with enterprise agreements were more likely to report an increase in productivity than managers in workplaces without enterprise agreements (DIR 1995a).

There are, however, still critics of the current system. For example, concerns have been expressed that the decentralisation of the industrial relations system is leading to an erosion of equitable pay and conditions for particular groups who are industrially weak. Concerns have also been expressed about the centralised framework's influence in the development of enterprise agreements, the appropriate role of unions, and the appropriate form of safety net protection.

A number of studies have revealed that many Australian firms have not implemented workplace related techniques to achieve best practice. Considerable gaps exist between world best practice workplace environments and those of many Australian firms. The ability of management and the workforce to address this gap will be critical to Australia's future international competitiveness.

Impact of microeconomic reforms on firms and industries

Government initiatives, including microeconomic reform measures, combine with changing market conditions to shape the pace and extent of structural change in the economy. At a broad level, the extent of structural change — as measured by changes in the composition of activity and employment — in the 1980s does not seem very different to that experienced in the 1970s. However, at a more disaggregated level, there is some evidence pointing to greater structural change in the 1980s.

Only a relatively small number of studies have examined the impact of microeconomic reform at the industry/firm level. Reflecting the diversity of reform initiatives, some reforms have positive impacts, while for others, the impacts are negative. In consequence, the net effect of reforms on individual firms and industries varies and is often not clear cut.

Some firms in assisted industries downsize or even go out of business as a result of reductions in assistance. However, at the same time, some firms will take advantage of reductions in their costs and other opportunities that arise as a result of changes induced by microeconomic reform. Export oriented industries, in particular, can be expected to gain from the reform process. Firms in export industries bear little of the cost of the reform process and have the potential to take advantage of cost reductions and other benefits flowing from many reforms.

The impact of microeconomic reform at the firm level reflects the responses that firms make to the changed environment. These responses are, by their nature, firm specific. Firms facing the same set of pressures may take very different restructuring paths.

While economic theory and general equilibrium studies can shed some light on the potential impact of microeconomic reform on firms and industries, little hard evidence is available.

The monitoring micro reform project

In May 1994, the government commissioned the BIE to undertake a *Monitoring Micro Reform* project over four years to help fill this information gap. In September 1994, the BIE released an issues paper setting out its preliminary views on the scope and coverage of the project. Feedback on the paper, which was circulated to over 30 industry groups and government agencies, indicated wide support for a case study approach. Work is already well advanced on the BIE's first case study examining the agri-food industries. The BIE has just commenced a second case study involving the automotive industry. Other areas are currently being evaluated as potential case studies.

Overall, the case study approach is expected to provide valuable insights at several different levels covering:

- the main impacts of microeconomic reform on the activities, operations and performance of firms;
- the significance of micro-economic reforms relative to other influences shaping changes to firms' operations over time;
- key drivers of differences in the experiences of firms within particular industries;
- the nature and extent of the dynamic effects of microeconomic reform on firms;
- firms' assessments of the relative importance of different reforms to their operations; and
- firms' views on the need, if any, for additional reforms having regard for the nature of their operating environment.

1 Introduction

Since the mid to late 1980s Australian governments have introduced profound changes into many spheres of our economy under the broad banner of 'microeconomic reform'. The term is now commonplace in political and business reporting. Yet, despite much discussion and an extensive range of research and analysis, we know surprisingly little about the effects microeconomic reform has actually had on many Australian industries and firms.

This information gap may contribute to the frequent disagreement in the community over the merits or otherwise of microeconomic reform. Other factors are also relevant. For example, attention in the first instance tends, understandably, to focus on aggregate or economy-wide outcomes — whether the bottom line is positive — rather than the differing effects of reform across the economy. Yet for individual businesses, workers and consumers, the focus invariably is on whether there are net benefits at their level. Beyond this, it is not always possible to differentiate the changes produced by specific micro policy reforms from those due to macroeconomic phenomena, or secular changes in tastes and technology. In fact, some of the initial impetus for microeconomic reform within Australia has come from a series of adverse macroeconomic developments.

1.1 Purpose and scope of the project

In *Working Nation* (Keating 1994a) the federal government initiated a four-year BIE project to monitor the impact of microeconomic reform on firms and industries. This is the first BIE report in the monitoring microeconomic reform series. It aims to set the scene and outline the BIE's thoughts about future work in the area.

The main aims of the project are: to increase the community's understanding of the effects of microeconomic reform on individual firms and industries; and identify the main factors giving rise to different experiences. Monitoring will also ensure that government, industry and the general public are aware of the progress of microeconomic reform and its main effects on particular industries and firms. The project will also assist in highlighting aspects of the reform program which are progressing well and those areas in need of further attention.

The BIE has actively sought industry, union and government advice in designing and developing the project. In September 1994, the BIE released an issues paper setting out its preliminary views on the scope and coverage of the *Monitoring Micro Reform* project. This was followed by a series of discussions and consultations. Most of the parties consulted agreed that a case study approach, supplemented by an initial scene

setting report, would provide valuable insights into the impact of the microeconomic reform process. Ultimately, the value of the BIE's research depends on the quality and quantity of information assembled — firm analysis requires firm level data.

The BIE has identified two areas for its initial case study work — the agri-food industries and the automotive industry. The agri-food case study is well advanced and will be completed by early 1996. Work on the automotive study commenced in September 1995 and, at this stage, should be completed by September 1996. The BIE plans to initiate two further case studies during 1996. Industries currently being considered as potential case studies include: mineral processing; tourism; textiles; clothing and footwear; chemicals; and financial services.

1.2 What is microeconomic reform?

In a nutshell, microeconomic reform is about improving our lot as a nation. Australia during the 1980s was falling behind — it no longer ranked amongst those countries with high national incomes. Governments faced the prospect of increasing levels of unemployment, price and wage inflation, and deteriorating productivity and terms of trade. They came to the conclusion that many past policies had been too inward looking and interventionist. These policies had distorted product prices and returns to capital, labour and other resources, sending out the wrong signals to investors, producers, workers and consumers.

Microeconomic reform is about getting the incentives structure in the economy right at the grass roots (micro) level, so that Australians can achieve high and sustainable standards of living. Increasing our productivity, that is getting more from the resources we use, is a way of achieving this goal.

Increasing competition in the Australian economy is a basic tool in the microeconomic reform process. In general, competitive pressures provide the incentive to improve productivity. They direct resources into those areas where we can achieve the most. They ensure costs are minimised, consumers are satisfied and entrepreneurs are rewarded. Many of Australian governments' past policies, such as tariffs, statutory infrastructure monopolies and regulation stifled the competitive process.

From the perspective of individual firms, microeconomic reform gives rise to new pressures as well as opportunities and, in the process, offers rewards to productive and pro-active managers and workers alike.

Microeconomic reform involves governments changing and adapting regulations and other measures to promote the more efficient and flexible operation of product and factor (land, labour and capital) markets. This includes the provision of goods and services by the public sector itself. Until comparatively recently, Australian governments have pursued reforms within their own jurisdictions with little coordination between jurisdictions. However, since the early 1990s it became

increasingly clear that Commonwealth and state governments need to collaborate in order to progress the microeconomic reform agenda in key areas such as infrastructure and regulation. This was reflected in moves toward a 'co-operative federalism' framework, through mechanisms such as the Special Premiers Conferences and the Council of Australian Governments.

In this report we make little mention of local government reforms, mainly because of the patchy quality of available information. Inclusion of the available information in this area would have produced a distorted and inconsistent picture when surveying change across industries and regions. We should not underestimate these omissions. For some firms the effects of local reforms to policies on land use and rates, for example, can overwhelm the cost savings achieved by, say, reforms to state energy networks.

1.2.1 Reform initiatives covered by the project

As a result of the BIE's wide consultations we decided microeconomic reform should be defined broadly for the purposes of this project. However, the initiatives covered have been limited to those that are within the direct control of Australian governments. The ambit of the project will therefore include microeconomic reform initiatives in the following broad categories:

- reductions in assistance;
- labour market reforms;
- infrastructure reforms;
- regulatory reforms;
- public administration reform; and
- reforms to business taxation.

1.3 Structure of the report

This initial report seeks to place microeconomic reform in perspective. It takes stock of some key elements of the microeconomic reform process and surveys what has been accomplished so far. The report also summarises the findings of some previous work on the impact of microeconomic reform. Beyond this, it identifies some key factors underlying differences in the way in which microeconomic reform affects different firms and industries and outlines the BIE's current and future work program for the project.

Chapter 2 examines, in broad terms, how the process of microeconomic reform evolved in Australia. It highlights, by way of a chronology, some of the more

significant events in the reform process. The following three chapters examine key reforms undertaken in three specific areas — trade liberalisation and industry assistance (chapter 3), infrastructure reform (chapter 4) and industrial relations and workplace reform (chapter 5). Each of these areas has attracted considerable analysis and discussion as part of the wider debate about reforming Australia's economy. Chapter 6 provides a broad overview of the extent of structural change that has occurred in Australia since the early 1970s, to put recent microeconomic reforms into context. Chapter 7 briefly reviews the findings of some of the general equilibrium studies used to assess the impact of microeconomic reform. It also highlights some key factors likely to influence how firms and industries respond to microeconomic reforms. Chapter 8 provides details of the case study approach being used by the BIE to analyse firm level impacts of microeconomic reform for particular industries. It also sets out the time frame for the future work program. Appendix 1 contains a chronology of key events in Australia's microeconomic reform process. Appendix 2 documents some of the impacts of microeconomic reform in the infrastructure industries on prices and quality of service. Appendix 3 examines the nature and progress of enterprise agreements in Australia. Appendix 4 provides an overview of various general equilibrium modelling studies that have examined the impact of microeconomic reform at the economy wide level.

2 The evolution of microeconomic reform in Australia

Prior to the 1980s, the term 'microeconomic reform' was virtually unheard of in Australia and macroeconomic policies featured predominantly on governments' agendas. Since the mid 1980s, however, the microeconomic performance of the Australian economy and subsequently microeconomic reform has received increasing attention. In 1989, the then-Treasurer, claimed that 'if you go into a pet shop every parrot is screeching microeconomic reform, microeconomic reform' (in Clark, D. 1989, p. 97).

The following sections look at how the process of microeconomic reform evolved in Australia and highlight some of the more significant events in the reform process. A chronology of the key events is presented in appendix 1. The discussion primarily focuses on reforms undertaken at the federal level. This focus should not, however, be interpreted as indicating little reform has taken place at the initiative of the other two tiers of government. The BIE recognises that state, territory and local governments have also undertaken a substantial program of reform.

2.1 Background

During the post World War II period up to the early 1980s, the regulatory structure of the Australian economy remained relatively stable. There were some examples of micro reforms over that period, such as the deregulation of interstate freight in the 1950s and the 25 per cent tariff cut in 1973. However, the reforms were *ad hoc* and did not form part of any systematic approach to reform (Forsyth 1992, pp. 7-8). Indeed, to some extent the policy approach could be regarded as reactionary. For example, the 25 per cent tariff cut was itself a response to the problems of coping with a strong macroeconomic upswing. Further, it was swiftly followed by the introduction of import quotas, in response to balance of payments problems.

For the first three post-war decades, macroeconomic policies, including pegged exchange rates and control of international capital flows, were a primary focus of Australia's economic policy. Under the pegged exchange rate regime, variations in the level of official foreign reserves absorbed any swings in the overall balance of payments. In the case of a severe imbalance on the external account, the exchange rate was adjusted to bring about the appropriate adjustments to the balance of payments. The Government also sought to influence the size of import flows by adjusting tariffs and other protection measures (see chapter 3).

During the 1960s and early 1970s, Australia experienced steady economic growth, while maintaining unemployment and inflation at relatively low levels. This changed in the early 1970s, when Australia was affected by a number of external influences including a world economy boom, a commodity price boom and external inflationary pressures. These shocks significantly affected the workings of the Australian economy and contributed to Australia experiencing high rates of inflation and unemployment, relatively weak economic growth and increased public sector borrowing. The high rates of inflation and excessive real wage increases eroded the price competitiveness of Australia's export and import competing sectors, which in turn led to a contraction in profitability and employment.

The developments of the 1970s led the federal government to realise that the industrial structure, which had developed under the made-to-measure system of tariff protection, was increasingly unable to support economic growth and employment. The significant changes in the pattern of world trade and international competitiveness reinforced this realisation. The high tariff levels in Australia were recognised as having contributed to an inward-looking manufacturing sector which was increasingly becoming uncompetitive on international markets.

In the light of the realisation that past policies were inadequate for sustaining economic growth and employment, the Government formulated the long term objective of encouraging the development of an internationally competitive manufacturing sector. In its 1977 *White Paper on Manufacturing Industry*, the government formalised its commitment to reducing protection:

> There is now a growing recognition in Australia of the adverse effects on economic growth that can result from pressing import-substitution beyond levels justified in changing economic circumstances. An important adverse consequence of pursuing import-substitution is that it can result in the forgoing of opportunities for specialisation in areas in which Australia has the greatest advantages. Tariff reductions to induce changes in industry structure and encourage greater specialisation in industry therefore have a role to play in the process of encouraging a more efficient manufacturing industry in Australia (Commonwealth of Australia 1977, p. 22).

Despite the government's commitment to reducing protection at that time, it did not act on it. As the goal of achieving a more specialised and competitive manufacturing sector 'would not be best served by proceeding at present with a program of further reductions in protection' (Fraser 1982, p. 947). While there was recognition that government assistance to industry was a major impediment to efficient microeconomic outcomes, macroeconomic considerations continued to dominate policy attention.

Commenting on the interventionist policies of the post war period, the government later claimed that:

> In the end, no amount of manipulation of the instruments of macroeconomic control (could) transform a non-competitive, inflexible and sluggish economy into one which can generate strong economic growth (Commonwealth of Australia 1984, p. 64).

2.2 Financial deregulation — the catalyst for reform?

By the late 1970s, economic commentators and the Commonwealth Government had begun to express concerns that the regulations imposed on the Australian financial system were having a negative impact on the effectiveness of monetary policy. A number of factors were constraining the effective management of the Australian financial system through traditional instruments of regulation. These included the persistence of relatively high inflation and large budget deficits during the 1970s, coupled with the development of stronger links between domestic and international financial markets.

> The growth of non-bank financial institutions operating beyond the direct influence of the Reserve Bank, the development of new financing techniques by banks and the increasing integration of domestic and overseas financial markets all contributed to the steady erosion of the effectiveness of monetary policy. Existing methods of marketing government securities were increasingly ineffective in the face of the need to market more securities and the impact of inflation on rates of return fixed in nominal terms (Harper 1985, p. 16).

and

> prior to financial deregulation the capacity to use fiscal and/or monetary policies to 'manage' domestic economies was constrained (Moore 1995, p. 4).

These concerns resulted in the Commonwealth Government establishing a Committee of Inquiry into the Australian Financial System (the Campbell Committee). The main recommendations of the committee were for a more open and less regulated financial system (AFSI 1981).

In the early 1980s, the government took the first steps towards removing controls on banks. These included: reducing restrictions on the assets and liabilities which banks could hold; the development of the treasury note; and the introduction of the tender system for selling government securities. With the change of government in 1983, the new Labor Government set up the Martin Committee to review the previous Committee's recommendations. This committee supported the Campbell Committee's recommendations and, as a result, the process of deregulating the financial system gained momentum. In 1983, the government floated the Australian dollar and abolished most of Australia's exchange controls.

Deregulation of the financial system in Australia occurred mainly as a result of macroeconomic concerns, such as inflation and large budget deficits, rather than microeconomic considerations.

> Improving the microeconomic efficiency of the financial system was not the primary goal of financial deregulation. This is not to say that the authorities were unaware of the costs to microeconomic efficiency inherent in the elaborate structure of prescriptive regulations that existed prior to 1980.

> Rather it is simply to point out that the undoubted microeconomic efficiency costs were not instrumental in bringing about the dismantling of a regulatory structure which had remained virtually intact since World War II.
>
> Macroeconomic considerations were uppermost in the minds of the authorities. In particular, by the end of the decade of the 1970s, it was obvious that regulations imposed on financial markets were impeding rather than facilitating the implementation of monetary policy (Ackland and Harper 1992, p. 46).

Although financial deregulation was primarily undertaken in response to macroeconomic considerations, many commentators see it as a catalyst for the current program of microeconomic reform in Australia. Forsyth (1992) claims that the Campbell Committee Report and its subsequent implementation was the watershed for the current program of microeconomic reform. He suggests that at the time of financial deregulation the Commonwealth 'did not have many other specific reform proposals, but it was open to consider them' (Forsyth 1992, p. 8). Ackland and Harper (1992, p. 45) also claim that it was largely the experience policy makers had with financial deregulation that prompted then to push for further reforms in other key sectors of the economy.

The government's decision to deregulate the financial market, float the Australian dollar and remove exchange controls represented a significant step towards microeconomic reform. These initiatives exposed the Australian economy to increased international pressures — pressures from which Australian governments had previously sought to keep the economy insulated.

2.3 Responding to a changing environment

In 1983 Australia emerged from a recession with historically high levels of unemployment coupled with relatively high price and wage inflation. In response, the newly elected government adopted policies aimed at reducing inflation and unemployment, including instituting an accord with the Australian Council of Trade Unions (ACTU). This accord provided a macroeconomic policy framework, with ACTU members agreeing to restrain their pursuit of wage increases to levels consistent with the government's macro targets. In exchange, the government gave commitments to equitable economic policies, including underwriting a 'social wage' through measures such as taxation, superannuation and health insurance. Other government initiatives at this time included the establishment of the Economic Planning Advisory Council (EPAC) to examine medium-term policy options.

As mentioned previously, the events of the 1970s (and early 1980s) led the government to recognise that reductions in protection could play an important role in encouraging more efficient industry structures. However, the government was also of the view that measures designed to make industry more efficient and internationally competitive would need to be supplemented with industry specific plans. From 1983

onwards, the government announced a number of industry plans, including plans for the steel, passenger motor vehicle, ship building, heavy engineering, and the textiles, clothing and footwear industries (see chapter 3). These plans were, amongst other things, designed:

> ...to provide short-term assistance to the industry to help it face up to the process of orderly adjustment with a view to attaining greater efficiency and stability (Button 1984, p. 2).

The Commonwealth and state governments also became increasingly aware that regulation was imposing significant and often unnecessary costs on industry. Regulatory overlap between Commonwealth and state/territory jurisdictions amplified these costs. With this in mind, the Victorian Government set up the Victorian Regulation Review Unit in 1985. The Commonwealth Government established the Business Regulation Review Unit (BRRU) in the same year. The BRRU's tasks included assessing the impact of existing regulations on business and establishing a review procedure for all new and amended Commonwealth regulation (BRRU 1986). Other state governments also implemented similar initiatives.

Widespread concerns about inefficiencies within the taxation system resulted in a National Tax Summit in 1985 where the government proposed three broad options for taxation reform. However, business and community groups attending the summit rejected each of these options. Despite this setback the government, in September 1985, announced a less ambitious tax reform package. Some of the more important initiatives in this package included the introduction of: a fringe benefits tax; a capital gains tax; a new foreign tax credit system; and a full dividend imputation scheme for company taxation (Benge 1992).

The mid 1980s saw further adverse macroeconomic developments in Australia, including a sharp deterioration in Australia's terms of trade and current account deficit, and continued inflationary pressures. The decline in world commodity prices caused a sharp depreciation of Australia's currency, which led to an increase in import prices. This in turn placed pressure on the real purchasing power of wages. In response to the potential for a price and wage spiral, the government and the ACTU agreed to only partial wage indexation in 1985, trading off wage increases for superannuation benefits and tax cuts. This represented a significant first step towards attempting to break the nexus between inflation and wage demands based on the cost of living.

2.4 Banana Republic

Concern about the rapid deterioration in Australia's international and domestic economic performance was graphically highlighted in May 1986 when the Treasurer, in a radio interview, stated:

> We must let Australians know truthfully, honestly, earnestly — just what sort of an international hole Australia is in... once you slow the growth under 3 per cent unemployment starts to rise again...then you're gone...then you're a banana republic (ABC Television 1993).

This very public statement and its aftermath played an important role in galvanising government policy responses. It ultimately led to the recognition that reforms to make the economy more flexible and better able to respond to external shocks and changed market conditions were necessary. According to EPAC:

> the case for microeconomic reform assumed special urgency because of the recurring inability of domestic supply to match the growth in domestic demand, with consequently high current account deficits and a rising external debt (EPAC 1990a, p. 3).

Although the macroeconomy was still the primary focus of the Commonwealth government's concerns it was becoming increasingly obvious that many macroeconomic problems had underlying microeconomic causes. In an Address to the Nation in 1986 (shortly after the 'banana republic' statement), the Prime Minister stated that:

> The now accelerated decline in the terms of trade is a dramatic manifestation of a problem that has been developing for decades. Such long-term problems require long-term solutions. The economy needs to diversify, on a competitive basis, to supplement traditional export activities. This would allow a wider range of products to compete on export markets, making us less susceptible to adverse world price movements in a few commodities (Hawke 1986, p. 953).

The government's response at this time was to introduce measures to improve the international competitiveness of Australia's exports. This included examining factors affecting the cost of producing and exporting Australian products. In response to concerns that inefficiencies within transport and handling industries were imposing cost penalties on exporters, the Prime Minister, also announced a number of studies (Hawke 1986). These studies included the previously announced royal commission into grain handling, transport and storage and new studies into liner shipping services, international air freight policy and shore based shipping costs. The results of the studies were to be assessed 'to determine whether any additional action could be taken to remove impediments to trade'. Also announced at this time was a review of agricultural pricing and marketing arrangements to examine whether these arrangements were constraining the international competitiveness of domestic processing industries (Hawke 1986).

2.5 Microeconomic reform — firmly on the agenda

By 1987, the term 'microeconomic reform' had started to appear regularly on the government's economic policy agenda. Although macroeconomic policies continued to dominate the economic policy debate, the government began to recognise the importance of microeconomic reform as a tool for improving the efficiency and

competitiveness of Australian industry. In a press statement in November 1987, the Treasurer stated that:

> The economic restructuring on which Australia has embarked will inevitably be a lengthy process. While the continuation of appropriate macroeconomic settings remain central to the adjustment task, microeconomic reform also has an essential role in improving the efficiency and competitiveness of Australian industry (Keating 1987, p. 5).

Reforms occurring elsewhere in the world also provided an impetus for the process of microeconomic reform in Australia. The 1980s saw a growing interest in structural reform throughout the world and many countries began to embark on programs to reduce impediments to efficiency. In a 1987 publication, *Structural Adjustment and Economic Performance*, the OECD commented that:

> Many countries have, in recent years, sought systematically to review microeconomic policies and reduce distortions to the functioning of markets. Yet the progress to date is uneven, and if the prospects for growth are to be durably improved, further action is needed (OECD 1987 p. 34).

As other governments around the world began introducing measures to improve their economies' performance, the Australian government realised that it could not afford to be complacent, if Australia was to maintain its trade shares and standard of living.

The Commonwealth Government made moves towards reforming government business enterprises (GBEs) in November 1987 with the tabling of *Guidelines on Commonwealth Statutory Authorities and Government Business Enterprises*. The guidelines aimed at establishing processes for better defining the objectives which GBEs served and against which their performance could be assessed. They also aimed to reduce the extent of government control over their operations. The Minister for Finance, in the tabling statement, commented that:

> The reforms indicate the Government's commitment to achieving the highest levels of operations and financial efficiency in Commonwealth business enterprises. This commitment flows from recognition that as a group these enterprises constitute an important business sector providing a significant proportion of the infrastructure on which the rest of the Australian economy depends (Walsh 1987, p. 1).

In 1987, the Commonwealth Government through the Australian Industrial Relations Commission (AIRC), acted to introduce more flexibility into the process of determining wages when it implemented a two-tier wages system. Under this system, the first tier provided for generally available wage increases while, under the second tier, wage increases were available at the enterprise or industry level in return for productivity improvements.

The government underpinned its commitment to microeconomic reform when the Treasurer announced a forward work program for the Industries Assistance Commission (IAC) in January 1988. The IAC was initially established by the Commonwealth Government to 'advise on assistance to industry.' The forward inquiry program extended the Commission's traditional inquiry areas of

manufacturing and agricultural assistance to broader ranging inquiries directed towards advising on the removal of impediments to improved efficiency and international competitiveness across the whole spectrum of industry. The broad-ranging references forwarded to the IAC around this time included inquiries into: government (non-tax) charges which imposed the greatest obstacles to efficiency and international competitiveness of Australian industry; the effects of domestic barriers and impediments to international trade in services; and impediments to competitiveness and efficiency in the development of the Australian travel and tourism industries.

The IAC's report on government (non-tax) charges found that the impact of government charges on the competitiveness of Australian businesses was largely dependent on how well public enterprises were performing. The report also found that poor performance by public enterprises was usually a result of unclear and conflicting objectives, the absence of effective competition and reliance on ineffective control and performance monitoring mechanisms. The report recommended that:

> Governments at all levels could initiate further action to improve performance. While this could (and should) include continued administrative reforms, the benefits available from improved public enterprise performance are unlikely to be fully realised unless broader approaches are adopted — in particular, dismantling barriers which presently shield many major public enterprises from competition (IAC 1989a, p. xxvi).

The report also recognised that there would be complex issues of relevance to a number of governments and that governments at all levels would need to jointly consider implementing the reforms.

The government subsequently drew on this report when considering its agenda of microeconomic reform and in evaluating structural reforms (IC 1990, p. 252).

Reform of GBEs was not confined to the federal arena. For example, in 1988, the New South Wales Government commissioned a report on the state's finances. The report recommended, amongst other things:

> an immediate move to corporatisation of government business undertakings in order to improve returns from these operations and prepare the way for later possible privatisation of some operations (NSW Commission of Audit 1988, p. vi).

In response to the report, the government commissioned a further study (NSW Steering Committee on Government Trading Enterprises 1988) which also recommended that the state's GBEs be corporatised. The New South Wales Government accepted the recommendation and the *State Owned Corporations Act 1989* was enacted. The state government then began to corporatise some of its GBEs, as well as pursuing other polices to improve GBE performance.

Other state and territory governments also pursued policies to improve the performance of their GBEs. For example, in 1992 the Queensland government

endorsed a white paper which set out principles for corporatisation. In the same year, the Victorian Government enacted legislation to facilitate the corporatisation and in some cases privatisation of its GBEs.

2.6 May 1988 Economic Statement

The Commonwealth Government's May 1988 Economic Statement was a landmark for the process of microeconomic reform in Australia. The initiatives announced represented a significant move away from the piecemeal approach to reform of the past to a much more broadly based agenda.

A major focus of the measures announced by the government in this statement were further reductions in border protection. Under the announced phased tariff reduction program, tariffs above 15 per cent were to be phased in annual steps to 15 per cent by 1992, while rates of 15 per cent or less were to be reduced to 10 per cent over the same period. For some industries these announced reductions meant tariff rates declining from 40 per cent to 15 or 10 per cent (Keating 1988, p. 123). Additionally, high levels of government assistance provided to some agricultural industries were reduced, and the 2 per cent revenue duty on imports was abolished. The government also announced accelerated phasing down of the assistance arrangements to the textiles, clothing and footwear industry. Reductions in assistance were easier to introduce at this time because of the substantial impact of the depreciation of the Australian dollar on the international competitiveness of Australian industries. In delivering the statement, the Treasurer commented that:

> The way forward for Australia is not to be closeted and sheltered, but to be open and dynamic, trading aggressively in the world. Only this kind of economy can provide the employment and rising living standards that Australians aspire to. This is the very point of the measures contained in this economic statement (Keating 1988, p. 16).

Although the major focus of the statement was on reducing tariffs and other assistance measures it also initiated a number of other important reforms. Many of the administrative constraints on government business enterprises were removed to allow them to operate on a more commercial footing. Other initiatives included the government's decision to terminate the two-airline agreement and the removal of certain barriers to competition in telecommunications. These initiatives signalled that the government recognised the importance of removing or modifying regulations that impeded efficiency as well as the importance of promoting competition for improving performance (see for example, Keating 1988, p.119-120).

The statement also introduced a number of significant taxation reforms. These included: extending the dividend imputation system of company tax to all Australian investors; removing the gold mining industry's unique exemption from income tax; and introducing effective-life depreciation in place of accelerated depreciation provisions.

Commenting on the initiatives announced in the 1988 statement, the IAC stated:

> These developments reflect a recognition that the community has not been well served by policies of industry preferment and regulatory measures which have impeded the economy's capacity to adjust. The reforms collectively constitute a major departure from past approaches and, if consistently pursued, will facilitate greater efficiency and competitiveness in Australian industry (IAC 1988, p. iii).

2.7 A broader agenda for reform

Also during 1988, the parliament passed the *Industrial Relations Act 1988*. This new legislation retained the existing system of conciliation and arbitration but introduced provision for certified agreements. Under the Act the Australian Industrial Relations Commission (AIRC) could, under certain conditions, certify an enterprise agreement between disputing parties, even if the agreement was inconsistent with AIRC principles. Although certified agreements under the 1988 legislation were rare, they represented an important early step towards increasing flexibility in a centralised industrial relations system (see chapter 5).

The 1988 national wage case hearing also saw moves to improve flexibility through the introduction of the AIRC's structural efficiency principle. This principle made wage increases available to unions that committed to a fundamental review of their industrial awards. Reflecting on these changes, particularly the implementation of award restructuring, the Treasurer noted:

> The challenge being faced in Australia is that of a highly competitive, increasingly integrated and rapidly changing international economy. This requires that all markets - labour, financial and product - become more flexible, efficient and competitive in order to ensure that the Australian economy can pay its way in such an international environment.
>
> A necessary ingredient is a wages system which will reduce the scope for leap frogging and which builds a broader base for skill development (Keating 1989, p.63).

The establishment of the Industry Commission (IC) in 1990, as the Commonwealth Government's major review and inquiry body on structural reform reflected the broader approach to microeconomic reform. The Treasurer, in his statement announcing the establishment of the IC, stated that:

> by analysing structural issues across a wider spectrum than tariff reform, the Industry Commission will be an important stimulus for reform (Keating 1989).

Absorbing the functions previously undertaken by the IAC, the Inter-State Commission and the BRRU, the IC was given a broader charter which included reporting on actions at *any* level of government affecting any industry. The government's policy guidelines for the Commission were 'cast in terms of encouraging the development of internationally competitive industries, facilitating structural adjustment, and reducing unnecessary industry regulation' (IC 1990, p. 2). The Commission's work program was broadened to encompass a wider range of

issues affecting the productivity and competitiveness of the overall economy. The revised charter indicated that Commonwealth, state and territory governments recognised the importance of co-operation in implementing broad-based microeconomic reforms. Commenting on the inclusion of the states in the broader charter, the IC stated that:

> Given the pervasive influence of the States in determining the institutional and regulatory framework for industry, their co-operation in broad-based microeconomic reform is crucial (IC 1990, p. 2).

The IC's broader charter was reflected in the range of inquiries sent to the Commission at this time, including inquiries into statutory marketing authorities, energy generation and distribution, rail transport, intrastate aviation, port authorities, urban transport, mining and minerals processing in Australia, public housing and water resources. Key areas in each of these inquiries came under state or territory jurisdictions or required joint action with the Commonwealth.

Many recommendations arising from these inquiries were subsequently adopted by Commonwealth, state and territory governments or provided the impetus for further deliberations and subsequent reform. For example:

- the Joint Coal Board, a New South Wales and Commonwealth Government authority, was abolished;
- initiatives were put in place to establish a national electricity grid; and
- initiatives were put in place to make airport charges better reflect costs.

2.8 March 1991 Statement

The Commonwealth Government's program of reducing tariff protection was given renewed momentum in its industry statement, *Building a Competitive Australia*, released in March 1991. The statement announced the continuation of the tariff reductions contained in the May 1988 statement, with most tariffs phasing down to 5 per cent by 1996, and further reductions in assistance to the passenger motor vehicle and textiles, clothing and footwear industries. The government's commitment to liberalising international trade and an across-the-board approach to reducing assistance was further confirmed by this statement. Commenting on the initiatives announced in the statement, the Treasurer declared that:

> The package of measures announced today ends forever Australia's sorry association with the tariff as a device for industrial development. ...By turning our backs on tariffs, Australia will be further propelled in its quest for international trade and efficiency, a search begun with the opening of the economy in 1983 when we floated the dollar and abolished exchange controls (DPM&C 1991, p. 2.1).

Although the focus of this statement, like the 1988 statement, was on reducing tariffs, there were also a number of other key initiatives aimed at achieving greater efficiency within Australia. The Prime Minister, in delivering the statement, said:

> ...with further tariff cuts, we are dismantling the barriers to competitiveness and efficiency that stand at the borders of Australia. This Government is also set on dismantling the barriers that exist *within* Australia (DPM&C 1991, p. 1.10).

Some of the other initiatives included widening exemptions from sales tax for business inputs and changes to depreciation provisions 'to bring them more in line with business realities'(DPM&C 1991, p. 1.15).

The statement also directed the BIE to undertake research on international performance benchmarking of infrastructure services used as business inputs. This benchmarking work is significant because it identifies the importance of infrastructure services to industry costs and develops measures for international performance comparisons. By comparing the performance of Australia's infrastructure services against world best practice, benchmarking provides a useful tool for promoting yardstick competition. Such competition can improve efficiency in markets not directly subject to competitive pressures. It also provides a means for assessing the impact of infrastructure services on the competitiveness of user industries. This initiative, by indirectly introducing competitive pressures, represented a significant step towards encouraging Australia's infrastructure industries to be more efficient.

2.9 Microeconomic reform — an ongoing process

A feature of the process of microeconomic reform in Australia during the 1980s and early 1990s has been that as reforms in one area have advanced they have revealed the need for further reform in other areas. The IC suggested that:

> A striking feature of the reform process to date is that, as one reform has been undertaken, it has revealed further rigidities that, when tackled, hold the prospect of further productivity gains (IC 1993a, p. 11).

The trade policy reforms initiated in both the 1988 economic statement and the March 1991 statement increasingly exposed many industries to international competition. However, a number of other industries, including GBEs, some agricultural goods and some of the professions, remained heavily insulated from competitive pressures. In the early 1990s, there was an increasing realisation that inefficiencies in these sectors ultimately reduced the competitiveness of traded industries.

In addition to these competitiveness concerns, state governments' budgetary stress provided further pressure for measures designed to improve the performance of GBEs. Responding to these concerns, all participants at the Special Premiers' Conference in July 1991 agreed to establish a steering committee to monitor the performance of government trading enterprises. The work of the steering committee underpins the

process of GBE reform by monitoring and publishing annual details of the performance of many of the GBEs in Australia. (The New South Wales Government had implemented a similar performance monitoring task for its GBEs two years earlier.) The BIE's benchmarking work complements the steering committee's work by addressing the international dimension. It establishes world best practice rather than Australian best practice as the relevant performance standard for a trading economy.

The importance of the performance monitoring work is that it acts as a driver for further reform. It provides benchmarks for evaluating performance and encourages the adoption of best practice techniques. On release of its first report on government enterprise performance, the steering committee stated that:

> This so-called 'yardstick competition' represents an important check on GTEs [Government Trading Enterprises] which operate in largely uncompetitive markets. Lifting the veil on their performance should provide important signals and incentives to management on how they can improve, with benefits to users through lower real prices and/or higher quality and to governments through higher returns or smaller drains on their budgets (SCNPMGTE, 1993).

Progress in GBE reform was only one of many streams of administrative and regulatory change underway in 1991. In January 1991 a national companies and securities regime replaced the separate Commonwealth and state laws. The regime simplified Australia's law dealing with companies and securities which facilitates information flows on commercial organisations financial position and prospects.

Australia's system of industrial relations was also undergoing substantial change. The national wage case decision in October 1991 represented a further step towards the decentralisation of industrial arrangements and wage determination. The AIRC introduced the enterprise bargaining principle. This principle allowed unions and employers to negotiate wage increases, reflecting productivity gains achieved by implementing efficiency measures. The 1992 amendments to the Industrial Relations Act introduced even greater flexibility into the determination of agreements and led to a substantial increase in their use. Commonwealth and state governments, subsequently, implemented legislation to facilitate the greater of use of enterprise agreements in the workplace. Most states adopted systems similar to the Commonwealth model. However, Victoria and Western Australia adopted different models (see chapter 5).

2.10 Co-operative federalism

By the late 1980s and early 1990s it was becoming increasingly obvious that to gain the full benefits of microeconomic reform a truly national approach was needed. In many areas where large gains from microeconomic reform had been identified, such as electricity and rail, reforms required commitments from all levels of government as well as co-operation between them. The Commonwealth Government was

increasingly coming up against resistance to reforms that depended on commitments from the states. In many instances, reforms that were in the interest of the overall economy often conflicted with the interests of state and local governments.

The 1991 Special Premiers' Conference made progress towards removing inter-state trade barriers. At that meeting the heads of state governments agreed, in principle, for the mutual recognition of regulations and standards. This represented a major step forward because, in the past, all attempts to unify regulations on a national basis had been relatively unsuccessful. These arrangements came into effect in March 1993. They create a common market for goods sold in Australia and reduce barriers to entry into occupations regulated at the state level.

Other important intergovernmental co-operative initiatives arising from the Special Premiers' conference included agreement to:

- establish a National Grid Management Council to manage the eastern Australian electricity grid; and
- introduce nationally consistent road regulations.

The increased level of intergovernmental co-operation also led to the establishment of institutions, such as the National Food Authority and the National Occupational Health and Safety Commission, to develop national standards. These new standards replace the sometimes conflicting standards in place at the state and territory level.

The 1992 *One Nation* statement built on these co-operative initiatives. *One Nation* announced proposals for developing integrated infrastructure networks, including an interstate electricity grid and a national standard gauge rail freight highway. These initiatives represented significant progress towards achieving intergovernmental co-operation and co-ordination for the implementation of reforms. The initiatives also signified a move towards reducing the duplication of services and administration between governments. Commenting on the need for better co-operation between governments, the Prime Minister stated that:

> ...the community and the economy must advance together; that all our efforts should go towards uniting the country, not dividing it... This is the kind of Australia we seek, and which I firmly believe we can have. An Australia which is more truly one nation (Keating 1992a, pp. 15-16).

Other important initiatives announced in *One Nation* included: measures aimed at improving competition in the supply of electricity; and measures designed to allow further entry of foreign banks. Changes to the *Industrial Relations Act 1988* were also announced. These changes aimed to facilitate enterprise bargaining at workplaces with little or no union coverage and, at the same time, provide safety net provisions through the award system.

The establishment of the Council of Australian Governments (COAG) in May 1992, was a significant step towards facilitating a national approach to microeconomic

policies and reforms. COAG is now the main body for discussions between heads of government on issues of national importance.

2.11 A national competition policy

As Australia responded to the challenges of achieving a single, integrated market, governments started to realise that there were significant benefits associated with developing a national competition policy. Following agreement by the various tiers of government on the need for such a policy, the Prime Minister, in October 1992, established an independent inquiry into a national competition policy headed by Professor Fred Hilmer. Commenting on the establishment of the inquiry, the Prime Minister stated:

> Following this review, we — the States, Territories and Commonwealth — will have the opportunity to establish a national competition policy. ...That is a policy which should support the development of Australia as one competitive market for our industries, not a set of divergent regulatory regimes (Keating 1992b, p. 11).

The Hilmer review, released in August 1993, took a broad approach to competition policy and recommended:

- competition policy should be pursued on a national basis;
- extending the *Trade Practices Act* to areas where it did not apply, including GBEs, statutory marketing authorities and unincorporated associations;
- new policy principles to regulate markets traditionally supplied by governments, particularly where there are natural or mandated monopolies. These principles included:
  - reviews of regulatory restrictions to competition on a national level;
  - structural reforms of monopolies;
  - limits on monopolistic pricing;
  - the granting of access rights to essential facilities; and
  - ensuring that public and private enterprises compete on neutral terms.
- a National Competition Council, be established jointly by the Commonwealth, state and territory governments to assist in progressing co-operative reforms; and
- the creation of an Australian Competition Commission by merging the Trade Practices Commission and the Prices Surveillance Authority (Hilmer 1993a).

The Hilmer review has been portrayed as ‘a watershed in the process of microeconomic reform in Australia’ (IC 1994, p. 6).

At the February and August 1994 meetings of COAG, the Commonwealth, states and territories agreed, in principle, to the competition policy principles outlined in the

Hilmer review. COAG also agreed that the benefits of economic growth and revenue arising from the Hilmer and related reforms should be shared between all governments. The February meeting also reached agreement on the establishment of a national gas market. This was significant because it represented one of the first steps towards implementing the principles of the national competition policy.

In *Working Nation*, the Commonwealth Government's 1994 *White Paper on Employment and Growth*, the Prime Minister, commenting on the COAG agreement, stated that:

> Together, we have recently accomplished a landmark agreement to move towards implementing the recommendations of the Hilmer Report on competition policy. Competition policy will be introduced to large parts of the economy that until now have been sheltered from it, including utilities owned by Commonwealth and State governments.
>
> In a number of other key infrastructure areas, including the ports, water, gas, electricity and rail, the Commonwealth is working with the States to develop international best practices and so a more efficient and competitive nation (Keating 1994b, p. 23).

The government also announced in *Working Nation* that the BIE would continue its work on international benchmarking of key infrastructure industries through to 1998-99. This work, which helps to promote international best practice outcomes, was extended to cover water supply, an analysis of pricing issues in relation to infrastructure service industries, and the benchmarking of key government business related service activities. The government's decision to continue and extend the international benchmarking work indicated the importance of this work in identifying the need for further reform to Australia's infrastructure. It also highlighted the fact that international best practice is likely to be a moving target that requires continuous monitoring and improvement. The broadening of the BIE's work program to include government services signified a perceived need for efficiency improvements in this area, encompassing activities such as environmental regulation, business licensing, quarantine and inspection services and customs.

2.12 Recent developments

On 12 April 1995, an historic agreement was reached. The Commonwealth, state and territory governments agreed to a new national competition policy, based on the recommendations of the Hilmer review. The agreement included:

- the extension of the *Trade Practices Act* to cover all businesses and state and local government enterprises;
- principles for reforming public monopolies, such as electricity and gas;
  - — access regimes allowing third party access to essential facilities, such as power grids, gas pipelines and railways;

— a schedule for reviewing existing anti-competitive laws and regulations. (The states and territories are required to develop a timetable for reviewing all laws that restrict competition by June 1996);

- provisions for more neutral competition between public and private sector enterprises. Governments are now required to publish statements detailing a policy for competitive neutrality; and
- establishment of the Australian Competition and Consumer Commission (to replace the Trade Practices Commission and the Prices Surveillance Authority) and the National Competition Council.

On 30 October 1995 the Assistant Treasurer announced that significant elements of the new competition policy would commence on 6 November 1995 (Gear 1995). On that date, a new regime allowing third party access to certain nationally significant facilities became operative. In addition, the Australian Competition and Consumer Commission commenced operations as the new watch dog of competition — monitoring prices, costs and profitability of industries and businesses. The National Competition Council also commenced its oversight of the national competition policy process. The Council will make recommendations to Ministers on third party access to infrastructure and advise on the effectiveness of state and territory access legislation and prices oversight arrangements. The Council will also assist governments' implement their reform programs.

The Assistant Treasurer also announced the extension of prices surveillance to state and territory GBEs (Gear 1995). The extension of the Trade Practices Act to areas beyond the Commonwealth's jurisdiction is expected to be finalised by 21 July 1996.

The broad-ranging nature of the national competition policy principles outlined above, are likely to provide the basis for the microeconomic reform agenda in the coming years. A significant challenge now facing Australian governments is to vigorously and effectively implement the main elements of national competition policy.

Commentators have applauded the decision to implement a national competition policy. However, some concerns have been expressed about inconsistencies in the application of competition principles. For example, in its 1994-95 Annual Report, the Industry Commission suggested:

> The direction now set by the competition policy agreements should drive reforms elsewhere in the economy. Other areas should not be sheltered from the same sort of competition principles. For example, Australia needs to continue to make labour markets more productive and flexible so as to receive the full benefits of competitive pressures on enterprises.
>
> .... The reversal of the Government's One Nation commitment to the creation of a single aviation market with New Zealand runs counter to the direction of competition policy. Similarly, coastal shipping policy continues to restrict the entry of foreign vessels to Australia's coastal trades. (IC 1995a, p. 17).

While not seeking to comment on these specific issues, the basic reason for encouraging competition throughout the economy is to improve efficiency — productive, allocative and dynamic. By generating increased income from the economy's physical and human resources society can better afford to aim for high outcomes against social, environmental and distributional objectives. However, where the range of policy instruments available to governments is constrained it may be necessary to weigh-up competing objectives. In such cases, governments must decide whether the trade-offs associated with following one approach over another are justified in terms of enhancing overall community welfare.

3 Trade liberalisation and industry assistance

For much of this century the Australian economy has operated with relatively high barriers against imports, particularly for manufacturing industry. Some of these barriers were natural, arising from the cost of transport and the distance between Australia and other industrialised countries. This 'tyranny of distance' has progressively declined, as transport and telecommunications have become more advanced and less costly and our Asian neighbours have become more industrialised. Other barriers were artificial. Initially they were put in place to raise revenue. Over time successive Australian governments utilised these barriers as tools to build up Australia's industrial capabilities and generate employment. Increasingly, sheltering 'needy' industry from international competition became their primary focus. In the latter part of the last decade, Australian governments initiated a reform program which will make Australia one of the most open economies in the world by the turn of the century.

This chapter firstly puts the current reform process in context by briefly summarising the earlier protectionist policies of Australian governments.[1] Section 3.2 reviews some of the major trade liberalisation and industry assistance reforms that have occurred since 1988. The chapter also includes a brief discussion of Australia's recent involvement with regional and global trade liberalisation (section 3.3) and presents some concluding comments in section 3.4.

3.1 An historical context

Since federation in 1901, trade barriers and industry protection have played a central role in Australia's economic development. This focus on assistance and trade barriers stemmed, in part, from the policies of a number of the colonies prior to federation. At that stage, tariffs were the main source of many colonies' government revenue. They were also, to varying degrees, a mechanism for protecting industry. By federation, the states' views on protection ranged from the free trade stance of New South Wales to the overtly protectionist stance of Victoria. Eventually the protectionist arguments, coupled with the need for tax revenue, prevailed. The new federal government, via its exclusive power to impose customs duties, put in place a system of tariffs for the nation. Following a review of the tariff system in 1908 the government of the day

[1] A comprehensive review of Australia's tariff history may be found in Capling and Galligan (1992).

raised tariffs above the levels set at federation to an average of 20 per cent. Australia's firmly entrenched protectionist policy also became closely linked to other social and economic objectives, such as 'fair wages'. Protection allowed assisted industry to earn a higher return on their investments and the arbitration system ensured that workers received a 'fair' share of this return.

In the 1920s Australia's protectionist policy became a vicious circle of tariff increases followed by wages increases. The government's concern about the circularity of tariff increases and wage rises led to a review of Australia's tariff arrangements by a committee of eminent Australian economists. The Brigden Committee reported to the government in 1929. It expressed concern about the escalation of the tariff but essentially endorsed its retention. The committee reached this conclusion on the grounds that 'the same average income for the same population could not have been obtained without protection' (Brigden report quoted by Capling and Galligan 1992, p. 93). The onset of the Great Depression and an ailing manufacturing sector saw the government introducing even higher tariffs.

The protective tariff had become 'the cornerstone of Australia's manufacturing industry policy' (Capling and Galligan 1992, p. 78). Indeed, in 1930 Sir Keith Hancock, a leading historian, noted:

> Protection in Australia has been more than a policy, it has been a faith and dogma. Its critics during the second decade of the 20th century dwindled into a despised and detested sect suspected of nursing an anti-national heresy (Hancock 1930, p. 89).

Although Australia had a tradition of high tariffs, it did provide preferential access to imports by way of lower tariffs for selected countries. The United Kingdom was the principal beneficiary of these preferences until the 1960s. The preference afforded United Kingdom imports had important consequences for the efficiency of Australian industry.

> The preferential arrangements had resulted in most capital equipment, component parts and materials for Australian manufacturing industries being obtained from the United Kingdom; it had tended to tie the development of Australian industries to the rate and type of development occurring in the United Kingdom and this had sometimes lagged far behind development in other industrialised countries (Rattigan 1986, p. 14).

Tariffs were not the sole form of trade barrier used by Australia. For example, after World War II quantitative import restrictions (quotas) were also imposed on imports from the United States and other countries to protect the 'sterling currency bloc'. Then, in 1952, to alleviate Australia's deteriorating balance of payments position, quotas were introduced for imports from all sources. These quotas remained in place until the balance of payments improved in 1960 (Rattigan 1986).

The manufacturing sector was by far the greatest beneficiary of the tariff. However, with the passage of time, the agricultural sector also received assistance to ensure 'orderly marketing' and, where possible, protection from imports. In many cases state governments instigated this assistance which relied on compulsory marketing

arrangements supported by legislation.[2] Price stabilisation was a common feature of these statutory marketing arrangements (SMAs). Over time, the federal government became more involved in providing assistance to agriculture. By the 1950s, it had provided statutory marketing or stabilisation support to the production and marketing of dried fruits, wheat, dairy and tobacco. These schemes, coupled with quarantine regulations, production and input subsidies and, later, taxation concessions for the agriculture sector led to an expansion of protection in the economy. 'Protection all round' or, at least, protection for two sectors of the economy, became the order of the day (Capling and Galligan 1992).

Australia's involvement in the General Agreement on Tariffs and Trade (GATT) highlights the importance the government placed on protection. Australia was one the original signatories to the GATT, which was established to achieve global trade liberalisation. However, Australia took no part in the multilateral tariff reductions negotiated in the 1950s and the 1960s.

> In part this was because successive Australian Governments had considered that offers by other countries to reduce barriers to trade in agricultural products (which formed the major part of Australia's exports) had not been good enough, but also because the Australian Government had wanted to continue to use the Customs tariff to diversify the Australian economy (Rattigan 1986, p. 10).

Capling and Galligan (1992 p. 107) point out that, as a result of these decisions, Australia by 1970 'had the dubious distinction of sharing with New Zealand the highest manufacturing tariff rates in the industrialised world'.

3.1.1 Some chinks in the protective armour

'Need' was the basis of Australia's tariff protection and more general industry assistance policy for over half a century. This assistance took many forms, including tariffs, quotas, bounties and subsidies, local content schemes and statutory marketing arrangements. These instruments of industry assistance by their very nature imposed a barrier to trade with the rest of the world. They sheltered many Australian industries so that, in many cases, there was little incentive for them to introduce new technology or respond to disciplines associated with international competition. The higher costs and lack of product diversity arising from these assistance arrangements penalised other Australian industries, exporting industries in particular, and consumers.

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[2] Under these arrangements a statutory authority is given power to acquire, market and set domestic prices. Price stabilisation and income stabilisation was a common objective of these arrangements. If a commodity is exported, domestic prices are generally set higher than export prices. (However, in some instances the reverse situation has occurred.) In some cases, returns from the export and domestic markets are pooled, to pay an average return to producers. These arrangements are designed to maximise growers returns and, in so doing, to raise prices paid by domestic consumers and producers who use the produce as an input. SMAs can operate in conjunction with tariffs or quotas.

In 1963 the federal government formed a committee chaired by Sir James Vernon, general manager of CSR, to inquire into the measures used to protect industry from imports. The Vernon Committee's 1965 report made a number of recommendations that were at odds with the protection 'dogma' of the day. It recommended that the Tariff Board introduce the notions of economic and efficient industries and take into account the economy wide consequences when considering protection. The Vernon Committee also stressed that an industry's existence was not, of itself, sufficient grounds to justify protection. The committee's recommendations were never implemented by Government.

The Tariff Board's 1969-70 annual report highlighted the extent of the assistance provided to industry, as well as the costs it imposed. In this report the Tariff Board for the first time reported its estimates of the effective rate of assistance (ERA). This summary statistic facilitates comparisons of the relative incentive effects provided by the assistance regime.[3] The Tariff Board reported that:

> the average rates of effective protection available to individual Australian manufacturing industries in 1967-68 ranged from 0 to 120 per cent, and the average rate for manufacturing industry as a whole was 46 per cent. This average rate of effective protection is equivalent to about $2 700m per annum (*Tariff Board 1969-70 Annual Report* quoted by Rattigan (1986) p. 78).

This potential cost of the tariff was 'about 20 per cent higher than the total expenditure that year [1967-68] by all Australian governments — federal, state and local — on education, health, social security, welfare and defence' (Rattigan 1986, p. 78). The press frequently quoted this figure and it gave ammunition to primary producers, lowly assisted or unassisted activities and consumer groups to increase pressure on the government for a reduction in the level of protection.

In 1971 the federal government announced the Tariff Board was to undertake a comprehensive review of tariffs. The Tariff Board had foreshadowed such a review some four years earlier. From Rattigan's perspective, the review would eventually reduce assistance for those industries which could only survive with substantial protection. This, he believed, would encourage a reallocation of resources to more efficient industries and improve national welfare. However, at that stage, the federal government still appeared to maintain a 'needs' based view of assistance. For example, it identified a number of considerations it might take into account when

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[3] The effective rate of assistance takes into account the assistance provided to an activity's output as well as any assistance, positive or negative, provided to intermediate inputs and land, labour and capital. More precisely, the ERA can be defined as the percentage increase in returns to an activity's value added per unit of output relative to the hypothetical situation of no assistance.

ERA = (Assisted value added less Unassisted value added)/(Unassisted value added)x100.

Wide disparities in ERAs indicate the potential for resources to be misallocated. That is, resources could be directed into activities which do not maximise the economy's gross domestic product.

reviewing an industry's assistance. These included 'reasonable and adequate protection for worthwhile industries' (Rattigan 1986, p. 98).

3.1.2 Acceptance of the need for a change in direction

The election of the Whitlam Government in 1972 led to a significant change in Australia's protectionist policy. In 1973, in the face of mounting inflationary pressure, the government cut all tariffs by 25 per cent. Macroeconomic considerations were the basis of this decision; nevertheless, it led to a substantial reduction in the level of manufacturing assistance. The effective rate for the manufacturing sector fell from 35 per cent in 1972-73 to 27 per cent in 1973-74.

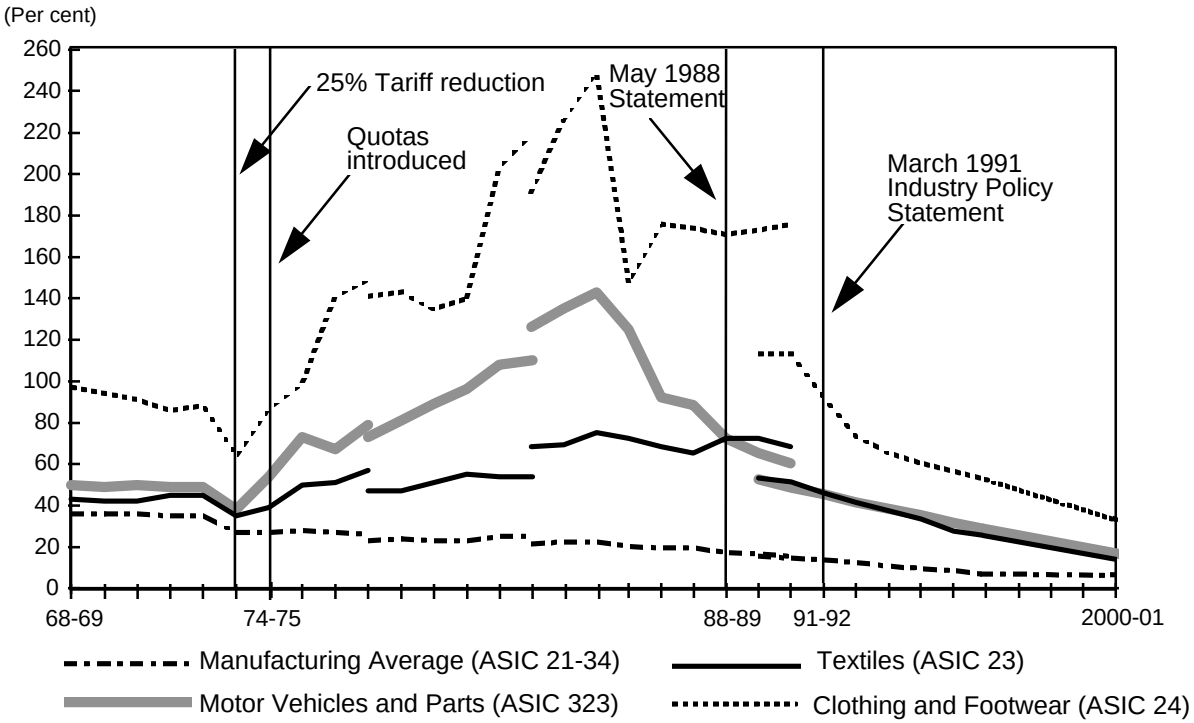
For some manufacturing industries, this decline in assistance was short lived. In 1974, in response to a declining economy, high inflation and rising imports, the government introduced quotas for a number of 'sensitive' industries. In many cases the government quickly removed the quotas. However, for the passenger motor vehicles (PMV) and textiles, clothing and footwear (TCF) industries, they became a long term part of their assistance arrangements.

Assistance to the manufacturing sector never returned to the heights estimated by the Tariff Board in its *1969-70* Annual Report. This was largely due to the government's decision not to resort to tariff increases in 1974. By 1974-75 the manufacturing sector's average ERA was 28 per cent, a small increase on the 1973-74 low. This estimate, however, masks the wide disparities in the assistance afforded manufacturing industries. The quota assisted activities — PMV, TCF — received substantially higher assistance than the sectoral average (see figure 3.1).

The Whitlam Government, in its first year of office, also gave the Tariff Board a new mandate and changed its name to the Industries Assistance Commission (IAC). The IAC's charter was much broader than the Tariff Board's. Its scope covered all sectors of the economy, not just manufacturing. The IAC Act required that an economy wide view of benefits and costs be taken when making recommendations on industry assistance.

With its broader charter, the IAC commenced reviewing and estimating the assistance provided to the agricultural sector. It found the assistance provided to agricultural activities tended to fluctuate. This was due, in part, to the counter cyclical nature of the assistance provided. The IAC estimated that the average ERA for agricultural activities was 28 per cent for 1970-71. By 1974-75 this assistance had declined to 8 per cent. The IAC also found substantial variations in the assistance afforded agricultural commodities. The ERA for some activities — for example, fresh milk, eggs, citrus and tobacco growing — was commonly above 100 per cent (IAC 1983).

Figure 3.1 Average effective rates of manufacturing assistance, 1968-69 to 2000-01



Source: Industry Commission 1995b

The IAC continued the tariff review instigated under the Tariff Board. This review led to reductions in tariff assistance for some industries but increasing disparities in the assistance provided to the manufacturing sector.[4] This was largely due to the more sensitive industries receiving higher assistance through quotas. The IAC estimated that at a sectoral level the tariff reductions arising from the review were more than offset by the increased protection arising from the quotas, which:

> added some 9 percentage points to the sectoral average effective rate, thereby more than offsetting the impact of the tariff reductions made since the introduction of quotas in 1974 (IAC 1987a, p. 14).

By the late 1970s, there was growing recognition that the high levels of tariffs and quotas had contributed to an inward looking manufacturing sector. And manufacturing industry was increasingly becoming uncompetitive on international markets. In its *White Paper on Manufacturing Industry*, the federal government formalised its commitment to a general reduction in protective tariffs in order to encourage a more

[4] The average variability or disparity in assistance can be estimated by a statistic known as the standard deviation, the larger the estimate, the greater the disparities in effective assistance. The estimated standard deviation in effective rates for the manufacturing sector increased from 23 percentage points in 1973-74 to 43 percentage points in 1983-84 (IC 1995a, p. 210).

efficient manufacturing sector. Although the government now accepted the need for tariff reductions, it was also of the view that:

> A time of lower economic activity, such as the present, is generally not an appropriate time for reducing protection (Commonwealth of Australia 1977).

3.1.3 Industry plans: a move to more selective assistance?

From the early 1980s, industry plans became an important element of industry assistance policy. This change in the policy stance commenced under the Fraser Government. It continued under the direction of John Button, the industry minister in the Hawke Government which came to power in 1983.

Industry plans were put in place for a range of activities. Initially these plans addressed specific problems. For example, PMV tariffs increased to 57.5 per cent in 1978 in the face of the Australian industry's reduced competitiveness. And in the following year the government introduced an export facilitation scheme to encourage exports of PMV and reduce input costs. Similarly, the government introduced a steel plan after BHP, Australia's principal producer, threatened to withdraw from the industry. This plan involved production bounties, a safety net mechanism for certain products and commitments from BHP to meet targets for production, investment and productivity. In the later years, the plans were intended to provide a stable environment to allow restructuring and phasing of protection. The PMV and the TCF plans, for example, involved phased reductions in tariffs along with the progressive removal of quotas. On announcing the arrangements for the motor vehicle industry, the Minister for Industry and Commerce commented that:

> They are designed to provide short-term assistance to the industry to help it face up to the process of orderly adjustment with a view to attaining greater efficiency and stability (Button 1984, p. 2).

In other cases, plans were put in place because the government considered the industries had potential for the future or had been impeded in their growth by some failure in the market — pharmaceutical products and information industries fall into this category.

Some commentators expressed concern that these plans represented a shift away from the economy wide approach to assistance to more *ad hoc* industry specific measures (see, for example, Gregory 1984). However, others saw them as an important tool for economic development. Stanford (1992), for example, drew attention to the large reductions in assistance being achieved under the PMV and TCF plans. He argued that the TCF plan's assistance reductions represented:

> an enormous reduction in assistance to the industry in this decade, and an outcome that could not have been realistically contemplated even five years ago (Stanford 1992, p. 42).

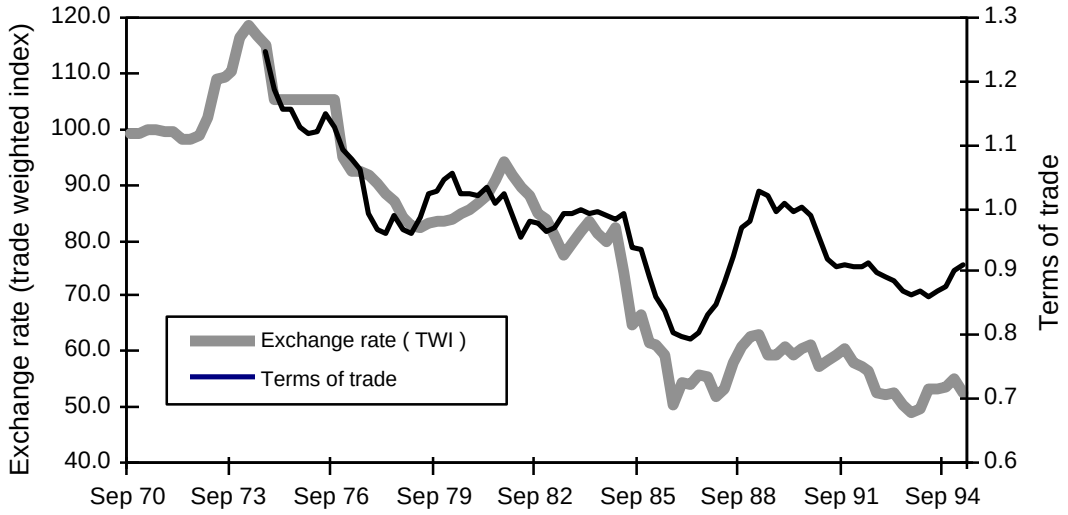
Other commentators have expressed similar views. For example:

> The assistance offered under most of the plans has both extracted some reasonable quid pro quo from the industry participants and has firmly kept in mind the need for longer-term reductions in the levels of effective protection granted (Gruen and Grattan 1993, p. 146).

3.1.4 *Prime Minister Hawke's* Address to the Nation

Financial deregulation in 1983 was an important step in the internationalisation of the Australian economy (see chapter 2). The decision to deregulate the financial market, float the Australian dollar and remove exchange controls increased the economy's exposure to international pressures. In 1985-86, falling commodity prices led to a pronounced worsening of Australia's terms of trade and highlighted these pressures (see figure 3.2).

Figure 3.2 Australia's exchange rate and terms of trade, 1970 to 1994



Note: Terms of trade series commences in September quarter 1974.
Sources: ABS Cat. No. 5302.0 (various years) and RBA (various years).

Instead of imposing quotas, as occurred in the 1974 terms of trade crisis, the government chose to look for longer term solutions to improve Australia's international competitiveness, in particular the competitiveness of exports (see chapter 2).

Exports, and enhancing Australia's export capabilities, were a key feature of the Prime Minister's address to the nation in 1986. The Prime Minister announced a number of studies into inefficiencies associated with the transport and handling industries used by exporters. These studies would determine whether any additional action was necessary to remove impediments to trade. Other measures included:

- a review of agricultural pricing and marketing arrangements (by the Department of Primary Industry) to assess whether they were constraining the international competitiveness of domestic processing industries; and
- a larger role for Austrade in facilitating high technology exports and exports by new small exporters. Austrade would also assist in developing export strategies for industries with export potential.

The Prime Minister also announced measures to assist the heavy engineering industry. These measures involved concessional interest rate loans to facilitate investments to improve the efficiency of plant operations (Hawke 1986).

3.2 Increased momentum towards reform

By the mid 1980s, attitudes towards protection had changed appreciably. To varying degrees, most academic economists, many senior bureaucrats, the financial press and particularly the exporting sectors' industry associations expressed anti-protectionist views. Reductions in assistance also became easier to introduce at this time. The exchange rate had substantially depreciated since its float in 1983 — the trade weighted index fell from an average of 80.7 in the March quarter of 1983 to an average of 58.0 in the June quarter of 1988 (see figure 3.2). This depreciation had a major, positive impact on the international competitiveness of Australian industries.

In response to this depreciation, the government, on the advice of the Automotive Industry Authority, made a number of amendments to the 1985 PMV plan, commonly known as the Button plan. These changes were to ensure that the industry had sufficient pressure to restructure. In 1988, the government abolished import quotas for PMV and reduced the tariff on PMV imports from 57.5 per cent to 45 per cent. Local content arrangements designed to assist component producers were also modified, so that by 1989 component producers competed under a tariff only regime.

By 1987-88, the average ERA for manufacturing had fallen to 19 per cent, less than half of the Tariff Board's 1968-69 estimate (figure 3.1). During this period, assistance to the sector had been influenced by the:

- 25 per tariff cut in 1973, the introduction of quotas and industry specific plans;
- further tariff reductions in 1977 — following the devaluation of the dollar and Australia's multilateral trade negotiations;
- tariff reductions and assistance rationalisations arising from IC inquiries covering key industries, such as chemicals and plastics; and
- the increased use of export incentives and bounties (IC 1995a, p. 32).

3.2.1 May 1988 Economic Statement

The depreciation of the dollar also provided the government with an excellent opportunity to undertake comprehensive reductions in tariffs and industry assistance more generally. It took this opportunity in May 1988. Reducing tariff protection was a major focus of the May 1988 economic statement. In announcing the phased reductions in tariffs, the Treasurer said:

> big cuts to industry protection through tariff reductions... will lower costs and further encourage our manufacturers to look beyond Australia for market opportunities (Keating 1988, p. 2).

A four year program of phased tariff reductions commenced on 1 July 1988. Tariffs above 15 per cent were to be phased down in annual steps to 15 per cent by 1992. Tariff rates of 15 per cent or less were to be reduced to 10 per cent over the same period. For many tariff items, the announced tariff phasing would amount to reductions substantially larger than those experienced in 1973. For example, imports of certain vegetable products would see a 75 per cent reduction in the tariff rate (table 3.1).

Table 3.1 May 1988 Economic Statement: proposed tariff phasing

Industry	*Maximum tariff rate applying 30 June 1988* *(per cent)*	*Maximum tariff at end of phased reductions* *(per cent)*	*End date*	*Percentage reduction in maximum tariff by end of phasing period* *(per cent)*
Chemicals & plastics	20	15	1 January 1992	25
Communications	26	15	1 January 1992	42
Glass & glassware	30	15	1 January 1989	50
Luggage	20	15	1 January 1989	25
Medical & scientific equipment	25	15	1 January 1990	40
Passenger motor vehicles	45	35	1 January 1992	22
Paper, pulp & printing	40	15	1 January 1990	62.5
Textiles, clothing & footwear	205 [a]	55 [a]	1 July 1995 [a]	73 [a]
Vegetable products	40	10	1 January 1994	75

Note :[a] This rate includes the base tariff rate, the tender premium paid on quota and the out-of-quota rate. Prior to the statement, TCF quotas were to be abolished in March 1996, the date of abolition was brought forward to July 1995.

Sources: Keating (1988) and BIE calculations.

The statement's 'tops down' approach to reducing tariffs was an important step towards reducing assistance. This approach, by applying a 15/10 tariff ceiling, targeted some of the most heavily protected industries and reduced the disparities in assistance between industries. Some notable exceptions to the 15/10 tariff ceiling were sectors that were the subject of industry specific plans. Nevertheless, the TCF and

PMV industries were also subject to phased reductions in tariffs. In the case of TCF, the government brought forward the abolition of quotas by 9 months to July 1995 (see table 3.1). But these industries continued to receive substantially higher tariff protection and industry assistance than other manufacturing industries.

A similar situation applied in the agricultural sector. Tariffs were not a major form of assistance for many agricultural commodities, however, they did apply to some commodities, for example, citrus, dried vine fruits and tobacco. In the case of sultanas and tobacco the tariffs worked in conjunction with a SMA and increased the level of assistance available. In these cases, the tariff reductions imposed a reduced upper limit on the assistance available from the marketing arrangements.

The May 1988 economic statement also reduced the assistance available under the SMAs applying to sugar growing and raw sugar and milk directed into manufactured dairy products. For sugar, the statement announced the removal of the embargo on sugar imports and the introduction of a tariff. This tariff was to be phased down from its initial rate of $115 per tonne to $70 per tonne in 1992.[5] For dairy products, the statement announced the acceleration of the phased removal of supplementary support payments. Despite these changes, sugar, tobacco and dairy production continued to receive substantially higher assistance than the agricultural sector average.

Notwithstanding the continued disparities in assistance levels, the announced tariff reductions sent important signals to Australian industry about the government's approach to protection. The reductions represented a major move towards exposing Australian industry to foreign market disciplines.

3.2.2 Statutory Marketing Arrangements reform continued

By 1988 the Commonwealth and state governments were increasingly questioning the appropriateness of using SMAs.[6] The concerns related to the efficacy of these arrangements in achieving their objectives and the costs imposed on the wider economy, particularly the food processing sector. Governments instigated a number of reviews of SMAs, which led to varying degrees of reform. For example:

- a committee, at the request of the Minister for Primary Industry and Energy, reviewed a number of administrative aspects of SMAs (Davis 1990). As a result of this review, the government, amongst other things, made the authorities under its control more accountable and established performance indicators;

[5] The May statement announced that the embargo was to be replaced by an *ad valorem* tariff. However, this was later changed to a specific tariff. The *ad valorem* assistance provided by a specific tariff is higher when world sugar prices are low and lower when world sugar prices are relatively high.

[6] In its review of Statutory Marketing Arrangements in 1991 the IC identified 98 SMAs of which only ten were under the jurisdiction of the Commonwealth Government (IC 1991).

- the New South Wales government instituted a review of egg marketing arrangements and, subsequently, deregulated its egg industry in July 1989. Two years after deregulation, the average price received by New South Wales egg farmers had declined from $1.45 per dozen to 89 cents per dozen and the average retail price declined from $2.04 to $1.54 (NSW Agriculture and Fisheries 1991). As New South Wales was the largest producer of eggs, the decision to deregulate in that state had far reaching ramifications for the Australian industry. Over the next few years inter-state trade in eggs from New South Wales forced the deregulation of the egg industries in South Australia and Victoria and partial deregulation in Queensland;
- a 1988 review of fresh milk marketing in Western Australia led to the removal of statutory controls over wholesale and retail prices of dairy products (IC 1991). Other states have also reviewed, and subsequently deregulated, their control over 'past the farm gate' distribution and sale of fresh milk. For example, the Victorian government has progressively removed controls on milk pricing beyond the farm gate; and
- in 1989 marketing arrangements for wheat were partially deregulated. This involved the removal of the Australian Wheat Board's (AWB) forty year monopoly over domestic sales. However, the AWB maintained its compulsory acquisition powers over wheat destined for export markets. Partial deregulation also saw the replacement of the wheat underwriting scheme with a government guarantee on AWB borrowings. Wheat pooling arrangements were also modified to allow returns to growers to more closely reflect the wheat quality they grow. In accordance with the recommendations of the Royal Commission into Grain Handling, Storage and Transport, the amended legislation also required the AWB to use cost effective transport options for moving wheat to the point of sale (Edwards 1992).

3.2.3 Garnaut report

Australia's increasing openness and the increasing emphasis placed on export, rather than import competing industry, produced a greater awareness of the rapidly growing Asian economies. In his 1990 report to the Prime Minister entitled *Australia and the Northeast Asian Ascendancy*, Professor Ross Garnaut saw great potential for improving Australia's relationships with Asia. Garnaut argued that Australia's and Asia's resources and asset bases were in many respects complementary. Strengthening diplomatic and trade links and ensuring non-discriminatory market access would be of mutual benefit. He also maintained that accelerating all aspects of the microeconomic reform process in Australia was critical if Australia was to achieve these benefits. It was particularly important that the government abolish 'all official restrictions in trade imposed at Australia's borders by the end of the century' (Garnaut 1990, p. 7).

3.2.4 Building a Competitive Australia

In March 1991, the Prime Minister, as part of his *Building a Competitive Australia* statement, announced new initiatives to further reduce tariff protection. When announcing the changes, Prime Minister Hawke said:

> with these tariff cuts, we demonstrate once again our commitment to liberalising international trade. The Government has been fortified in this approach by a number of recent reports, not least Dr Ross Garnaut's Australia and the Northeast Asian Ascendancy (DPM&C 1991, p. 1.7).

As a result of the statement, most tariffs will have declined to a maximum of 5 per cent by July 1996 (see table 3.2). Other Commonwealth assistance to the

Table 3.2 Tariff phasing arrangements arising from the March 1991 Statement (per cent)[a]

	1990	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*
PMV											
Passenger motor vehicles & original equipment	40	37.5	35	32.5	30	27.5	25	22.5	20	17.5	15
PMV replacement parts			15	15	15	15	15	15	15	15	15
TCF[b]											
Apparel & certain finished textiles	55	55	51	47	43	40	37	34	31	28	25
Footwear	45	45	41	37	33	30	27	24	21	18	15
Cotton sheeting & woven fabrics	40	40	37	33	31	28	25	22	19	17	15
Other fabrics	35	35	32	29	27	25	23	21	19	17	15
Footwear parts	35	35	32	29	26	23	20	17	14	12	10
Non-quota TCF	25	25	23	21	19	17	15	13	12	11	10
Other non-quota TCF	15	15	12	10	8	5	5	5	5	5	5
Sugar and certain vegetable products											
Raw and refined sugar (per tonne)	$115	$76	$55	$55	$55	$55	$55	$55	**c**	**c**	**c**
Certain vegetable products[d]	30	25	20	15	10	9	8	7	5	5	5
Other tariff items											
General tariff rates (previously phasing to 15 per cent)		15	12	10	8	5	5	5	5	5	5
General tariff rates (previously phasing to 10 per cent)		10	9	8	7	5	5	5	5	5	5

Notes: [a] All rates are the *ad valorem* tariff applied to the free on board value except for sugar, where a specific rate applies.
[b] Until 1993, these rates represent the base tariff rate. A tender premium, reflecting the quota, also applied to imports. Quotas were phased out completely by 1 March 1993.
[c] To be determined. The sugar tariff will be reviewed in 1995-96.
[d] Covers dried, dehydrated potatoes, flour, meal and flakes of potatoes and tomato products.

Source: DPM&C 1991.

manufacturing and agricultural sectors by way of bounties was to be reduced in line with the pace of tariff reform.

The more highly assisted activities in the manufacturing sector — PMV and TCF — were subjected to different phasing arrangements (see table 3.2). The assistance arrangements which will apply to these industries post 2000 will be reviewed in 1996. Longer term assistance to some of the more highly assisted activities in the agricultural sector — dairy, sugar and tobacco growing — would be decided at a later date in response to IC inquiries which were either underway or foreshadowed (see box 3.1). The assistance afforded these three agricultural activities raises prices paid by domestic manufacturers and consumers above those that would apply under free trade. This is a common feature of assistance afforded by SMAs. These higher costs tend to work against adding value to Australia's agricultural commodities for export.

Box 3.1 Longer term assistance arrangements for the dairy, sugar and tobacco industries

Dairy, sugar and tobacco growing have traditionally received high levels of industry assistance. In 1991-92, for example, the effective rates of assistance for these three activities were estimated at 73, 21, and greater than 200 per cent, respectively. At the time, the agricultural sector's average ERA was 12 per cent (IC 1994).

Assistance to **dairy** farmers involves a complex set of arrangements at the Commonwealth and state government level. A Commonwealth imposed levy, paid on all milk produced, was an important part of these arrangements. This levy funded market support payments for exported manufactured dairy products. The marketing arrangements also increased domestic prices for fresh milk and manufactured dairy products. These higher prices more than compensated producers for the levy they paid.

Commonwealth assistance to the dairy industry has been rationalised and reduced since the introduction of the Kerin Plan in 1986. The IC reviewed these assistance arrangements in 1992. Following this review, new arrangements, known as the Crean Plan, were introduced. Under the Crean Plan market support payments were to be phased down in equal steps to 10 per cent by 2000. Under the Kerin Plan, market support payments could not exceed 30 per cent of the average export price. As a consequence of the successful completion of the Uruguay Round of GATT, these assistance arrangements were considered as an export subsidy. The export subsidy terminated on 1 July 1995.

The new arrangements, which are GATT consistent, continue to support the domestic industry by increasing the domestic price of dairy products. These new arrangements will phase out completely by 30 June 2000 (DPIE 1995).

Like dairy, assistance to **sugar** growing and milling involves a complex set of arrangements. The Queensland Government controls production, acquisition and returns to growers and millers. The Commonwealth assists the industry through tariffs. Under these arrangements, the domestic price of sugar is higher than the price received on the export market — approximately 80 per cent of Australian sugar production is exported as raw sugar.

Box 3.1 Longer term assistance arrangements for the dairy, sugar and tobacco industries (continued)

The May 1988 economic statement removed the embargo on sugar imports and introduced phased reductions in the new, specific tariff rate from $115 per tonne in 1990-91 to $55 per tonne in 1992-93. Following the IC review of the industry in 1992, and a further review by an industry task force, the Commonwealth Government, in February 1993, decided to maintain the tariff at $55 per tonne until July 1997. Tariffs to apply post 1997 will be subject to a review in 1995-96.

For nearly three decades Australian **tobacco** product manufacturers operated under arrangements which gave them concessional (duty free) entry of imported leaf. Concessional entry of imports was conditional on producers having at least 50 per cent of their products content sourced from locally grown leaf. This local content scheme had stifled competition in the growing industry and allowed growers to obtain higher prices for their product. In response to these arrangements, the industry developed an inefficient structure, with too many growers and too much capacity to supply the demand for the domestically produced tobacco leaf (IC 1994).

The Commonwealth Government announced a tobacco industry restructuring package in December 1994. This package was in response to the recommendations of an IC inquiry into the industry, discussions with manufacturers and growers and the government's commitments under the GATT Uruguay Round of trade negotiations. The package removed the local content scheme and all tariffs on tobacco leaf, manufactured tobacco and tobacco products by 1 January 1995. The package also included industry restructuring assistance, funded from a 'one off' contribution of $10.8 million by tobacco product manufacturers and a similar restructuring contribution from the three tobacco growing states (Collins *et al* 1994).

The implementation of the March 1991 statement tariff reductions will reduce the ERA for the manufacturing sector to 6 per cent by 1996-97. This is less than a third of the ERA applying prior to the implementation of the May 1988 Economic Statement. By 2000, with the completion of the announced reductions in assistance to PMV and TCF, the ERA will have declined to 5 per cent. At that stage, PMV and TCF tariffs will be significantly higher than the 5 per cent maximum tariff afforded other manufacturing activities (see table 3.2).

Although the government had instigated another round of tariff reductions it was not prepared to allow Australian producers to be 'seriously damaged by imports at dumped prices' (DPM&C 1991, p.5.18). As a consequence, the government strengthened Australia's anti-dumping processes. The Prime Minister also stressed that the government would maintain its vigorous campaign through the Cairns Group to bring agriculture under the GATT's international trade rules.

3.2.5 Industry policy in the future

Working Nation set down the Federal Government's future directions for industry and tariff policy. It confirmed that the tariff reduction program announced in 1991 would remain on track. At the end of the current tariff reduction schedule, the general tariff rate would remain:

> at a maximum of 5 per cent beyond 1996... Tariff and related arrangements for the passenger motor vehicle, and textiles, clothing and footwear industries will remain fixed through to the end of the decade. They will be reviewed in 1996, with a decision taken in 1997 on arrangements to apply beyond the year 2000. The sugar tariff will remain fixed until 1995-96, with a review conducted in 1995-96 to determine levels for 1996-97 and beyond (Keating 1994a, pp. 43-44).

The Prime Minister also articulated his view of the government's industry policy role:

> The present objective of industry policy, adapted to the new environment facing firms, is to accelerate the internationalisation of the Australian economy by focusing on the factors critical to success in the global market place... The emphasis is not on industries, but on competitive enterprises in any sector of the economy. In short, Government programs are designed to help build competitive firms (Keating 1994a, p. 58).

3.3 Trade liberalisation beyond Australia's shores

The Closer Economic Relations Trade Agreement (CER) between Australia and New Zealand was an early step towards Australia's trade liberalisation. The CER superseded the New Zealand-Australia Free Trade Agreement in 1983. The key difference between the CER and the earlier agreement was that trade across the Tasman was much more liberalised under CER. Under the New Zealand-Australia Free Trade Agreement, trade between Australian and New Zealand was to be progressively liberalised for a limited number of specified goods. But, under CER trade between the two countries is free of restrictions except for specific areas of trade which are set aside for later consideration.

The New Zealand-Australia Free Trade Agreement was a relatively inward looking agreement and the conditions underlying it reflected the protectionist views of the time. In contrast, the CER, particularly after the 1988 review, genuinely accepted there were benefits to both countries from creating a single, undifferentiated trans-Tasman market for goods and services.

The Australian government has also used international trade forums to press for world wide trade reforms. Australia, through its involvement in the Cairns Group, played a major role in the successful completion of the GATT's Uruguay Round. This round produced agreement between member countries on the implementation of a number of trade liberalisation reforms. These include the:

- conversion of non-tariff barriers into tariffs which have been bound at a maximum level;
- inclusion of agriculture and services in the GATT framework;
- reduction of tariff levels; and
- phased reduction of agricultural assistance.

In response to the successful completion of the Uruguay Round, the Federal Government has undertaken a number of initiatives to ensure that Australia's assistance to agricultural products meets the new GATT conditions (see box 3.1).

The government expects that the implementation of the Uruguay Round will lead to a substantial growth in world trade and improved prospects for Australia. For example, a lower limit of the long term gains to Australia's GDP from the liberalisation of trade in manufacturing, agriculture and resources could be in the order of $4.4 billion, in 1992 dollars (IC 1994).

Recognising the importance of trade with our near neighbours and the potential for future trade, the Australian government has also pursued continuing liberalisation of trade with Asia. The Asia Pacific Economic Cooperation (APEC) forum, of which Australia is a member, has put forward a program of trade liberalisation even broader than the GATT Uruguay Round of reforms.

In 1994 the leaders of the APEC group of economies met in Bogor, Indonesia. The meeting discussed ways in which they might enhance the equitable growth and development of the Asia Pacific region, and the world as a whole. To this end, the APEC leaders resolved to adopt the long-term goal of free and open trade and investment in the Asia Pacific region by 2020. The achievement of this goal will differ between countries, taking into account the different degrees of member countries' economic development. The industrialised countries, including Australia, agreed to achieve free and open trade and investment by 2010. The less industrialised or developing countries would achieve the free trade goal by 2020 (BIE 1995a).

The Osaka APEC summit meeting in November 1995 endorsed the earlier Bogor framework. At the next meeting of APEC, which is scheduled for 1996 in Manila, members will submit detailed action plans to reduce trade barriers.

3.4 Concluding comments

Over the last decade or so, there has been a significant move away from Australia's traditional, protectionist industry policy stance. The phased reductions in tariffs, quotas and other forms of industry assistance have been an integral part of Australia's microeconomic reform agenda. They have played a significant role in opening the Australian economy to the disciplines of international competition. APEC's moves toward free and open trade and investment in the Asia Pacific region, will complement Australia's new policy stance. The implementation of the Bogor resolution is also likely to have significant implications, over the period to 2010, for the assistance arrangements applying to Australia's relatively highly assisted industries, such as TCF and PMV.

The changes to assistance arrangements outlined in this chapter can be expected to have initiated substantial restructuring in the Australian economy. Undoubtedly this will involve some costs, but the expectation of the government is that the benefits of the reform process will substantially outweigh these costs. As highlighted in chapter 2, microeconomic reform is about much more than trade liberalisation and assistance reductions. The complex web of microeconomic reforms is likely to affect different industries in different ways. Focussing on the effects of individual reforms in these circumstances is likely to give rise to quite misleading assessments of the impact of microeconomic reform in general. Two other key areas of the reform process — infrastructure reform and industrial relations and work place reform — are the subject of the next two chapters.

4 Reforms to infrastructure and related industries

Since the mid to late 1980s, Australian governments have introduced a number of reforms designed to improve the performance of infrastructure industries. The performance of these industries is recognised as having a significant influence on the international competitiveness of Australian firms.

Australia's infrastructure industries have undergone a variety of reforms at the federal, state and local government level. It is beyond the scope of this study to comprehensively document the full range of infrastructure reforms implemented by the Commonwealth, state, territory and local governments. Instead we concentrate on the various approaches to reform and the impact these reforms have had on dividend payments to governments and the price and quality of infrastructure services. Operating efficiency measures are also important when assessing the impact of reforms. However, in this report we focus on customer-oriented measures relevant to business users. The BIE's international benchmarking reports and the recent overview report (BIE 1995b) comprehensively discuss the operating efficiency of the various infrastructure industries.

In the first section of this chapter we look at the significance of infrastructure industries in the economy. Section 4.2 briefly discusses the main drivers for infrastructure reform in Australia. The various approaches to infrastructure reform are identified in section 4.3, while section 4.4 looks at the impact of these reforms. Section 4.5 presents concluding comments.

4.1 Significance of infrastructure industries in the economy

Infrastructure and related industries are a significant part of the Australian economy (table 4.1). In 1993-94, they accounted for around 11 per cent of Australia's gross domestic product (GDP), or 17 per cent of the total production of service industries. In terms of employment, they employed well over half a million people, that is, around 9.5 per cent of total services and 7.5 per cent of all sectors' employment. The public sector dominates the provision of infrastructure services contributing around 85 per cent of the total. Total public and private investment in infrastructure services account for around 38 per cent of total investment by service industries (BIE 1994a).

Table 4.1 Significance of infrastructure and other services in the Australian economy, 1993-94

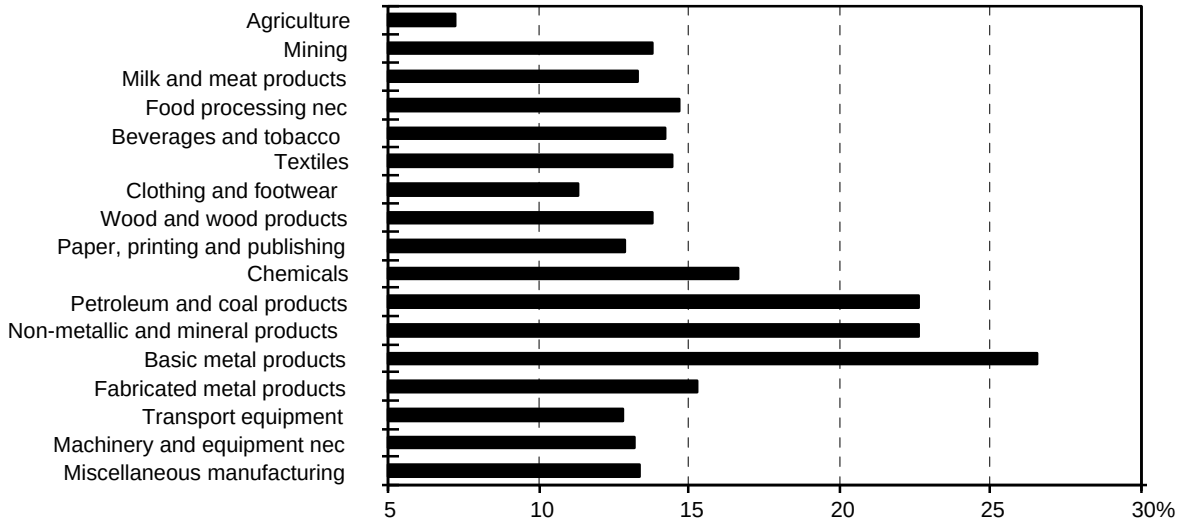
Industry	Gross product[a] *($ billion)*	*Proportion of GDP (per cent)*	*Persons employed ('000)*
Infrastructure services			
Electricity	8.9	2.3	
Gas	0.8	0.2	
Water, sewerage and drainage	3.4	0.9	92.2 [b]
Rail transport	1.8	0.5	
Water transport	1.8	0.5	
Air and space transport	4.6	1.2	
Road, other transport and services	11.3	2.9	366.4 [c]
Communication services	11.9	3.0	128.5
Total infrastructure services	*44.6*	*11.4*	*587.1*
Other services			
Construction	26.4	6.7	559.6
Wholesale and retail trade	65.1	16.6	1 627.7
Accommodation and restaurants	7.1	1.8	347.4
Finance, property and business services	47.7	12.2	990.3
Government administration and defence	16.1	4.1	368.3
Education, health and community services	39.6	10.1	1 224.7
Other	14.5	3.7	469.3
Total services	261.1	66.6	6174.4
Mining	17.3	4.4	89.4
Manufacturing	61.4	15.6	1 082
Total all industries	392.0	100.0	7 755.1

Notes: [a]Constant 1989-90 prices. [b]Persons employed in electricity; gas and water; sewerage and drainage industries. [c]Persons employed in rail transport; water transport, air and space transport; road, other transport and services industries.
Sources: ABS (1995a, 1995b).

Although infrastructure services are, generally, not directly traded internationally, they contribute to costs in all industries. They, consequently, influence the competitiveness of Australian firms and the productivity of the Australian economy. Costs of infrastructure services accrue in final products both directly and indirectly — through the passing on of costs of infrastructure used in the production of intermediate inputs. Figure 4.1 shows the contribution of the direct and indirect costs of infrastructure service inputs to final output costs in 1993-94. The contribution varies between industries from around 7 to almost 27 per cent. Electricity, road transport and

communications are the major infrastructure inputs used by all industry sectors (BIE 1994a).

Figure 4.1 Cost shares of infrastructure inputs to selected industries, 1993-94



Source: COPS 1994.

The industries with the greatest input of infrastructure services are the mineral processing industries — including basic metals and products (extraction of metals from ores) and non-metallic mineral products (glass and clay manufactures). Petroleum and coal product industries are also large users of infrastructure services. In contrast, agriculture has, on average, relatively low requirements for infrastructure inputs. However, many individual commodity groups within this broad industry group are significant users of infrastructure inputs.

The provision of infrastructure in Australia has historically been dominated by government owned and operated enterprises, commonly known as GBEs. The performance of these enterprises also affects government finances. If governments are to underwrite poor-performing or loss-making GBEs they need to either increase taxes or reduce spending in other areas. According to FitzGerald (1993, p. 33) these enterprises have:

> ... traditionally been an absorber of national savings. However, recent initiatives, including the sale of some enterprises, are reducing the extent of this draining such that the sector is now approaching balance.

Many GBEs operate in industries with monopoly elements including regulatory and institutional barriers to competition. In many instances, the tendency to monopoly reflects the nature of the infrastructure network or scale economies associated with other aspects of service provision. A number of GBEs, or segments of GBEs, are natural monopolies. A natural monopoly exists if a single firm, using cost minimising

technology, can produce the industry's total output cheaper than two or more firms. In the past, Australian governments, when faced with this situation, have generally opted for public ownership. In other cases, monopoly status had been conferred by legislation. In many instances, these government owned monopolies operated with subsidies from general taxation revenue or were required to just recover operating costs.

Australian governments have often required infrastructure providers and other GBEs to supply services to certain sections of the community on a non-commercial basis. These services, commonly known as community service obligations (CSOs), relate to governments' broader policies or social goals. In order to meet CSO requirements, GBEs have often pursued inefficient pricing practices, such as cross-subsidisation.

The monopoly status granted to infrastructure providers, coupled with government ownership and requirements to provide CSOs, has tended to substantially lessen the incentives for the sound commercial performance of GBEs in Australia. In the past, there has been little in the way of incentives for GBEs to minimise costs or earn a commercial rate of return.

4.2 Main drivers for infrastructure reform

The government's decision in 1983 to deregulate the financial market, float the Australian dollar and remove exchange rate controls increased Australia's exposure to international pressures (chapter 2). Australia's declining terms of trade in 1985-86, following a sharp fall in commodity prices, led the government to look for long-term solutions to improve Australia's international competitiveness. The Business Council of Australia (BCA), discussing some of the reasons for Australia's deteriorating trade performance during the 1980s stated that:

> ..... it is harder to compete successfully on world markets when, often, unnecessarily, Australian businesses have to pay uneconomic costs for some inputs (BCA 1990, p. 21).

In 1986, recognising that inefficient transport and handling industries were imposing unnecessary costs on exporting industries, the Prime Minister announced a number of studies into these industries. The results of the studies were to be assessed 'to determine whether any additional action can [could] be taken to remove impediments to trade' (Hawke 1986).

In 1988, responding to continuing and widespread concerns about inefficiencies in infrastructure industries, the Government forwarded a number of references to the Industries Assistance Commission (IAC). Two key references covered inquiries into those government (non-tax) charges which imposed the greatest obstacles to international competitiveness of Australian industry and the effects of domestic barriers and impediments to international trade in services.

These inquiries revealed widespread problems with the pricing and provision of infrastructure services. For example, the IAC's report on government (non-tax) charges, found that the competitiveness of Australian businesses was being adversely affected by a number of inefficiencies across a range of public enterprises. The inquiry revealed that the efficiency with which public enterprises produced and priced their outputs affected the competitiveness of Australian industry both directly through the cost of inputs and indirectly through competition for resources. The IAC also reported that the principal causes of poor performance by GBEs included: unclear and conflicting objectives, absence of competition and reliance on ineffective control and performance monitoring mechanisms (IAC 1989, p. xvi-xviii).

The IAC's inquiries into energy generation and distribution and rail transport also found that lack of competition in government provided infrastructure was a key source of inefficiency.

Other reviews came to similar conclusions. For example, the NSW Commission of Audit (1988) found evidence of 'massive operating inefficiencies' in that state's GBEs. They found that the Urban Transit Authority of NSW had costs per kilometre for bus operations 50 per cent above benchmark levels. They also found that the Maritime Services Board was making a return on assets of less than 1 per cent (Domberger 1992). Similar reviews in a number of other states and territories identified widespread performance weaknesses by their GBEs (EPAC 1990b). The OECD also found that Australia's performance in some public utilities fell well behind the OECD average:

> While open to large error, OECD comparison of productivity levels in the public utility sector indicate that labour productivity in Australia is less than half the OECD average and capital productivity is a little more than half. Recent estimates of the transport sector suggest that there are potential savings of 17 to 18 per cent of total business shipping and shore-based transport costs, and the present airline policy is thought to have increased transport costs by 8 to 10 per cent over comparable US airlines (OECD 1990, pp. 50-51).

As trade liberalisation exposed many industries to increased international competition, it became evident that inefficiently provided and priced infrastructure services were adversely affecting the competitiveness of Australian industries. Trade liberalisation also revealed the unbalanced nature of Australia's reform process, non-traded industries, such as the infrastructure industries also needed attention. Australia's geographic isolation and the vast nature of the country, further reinforced the importance of efficiently provided transport and communications facilities.

Budgetary concerns provided further pressure for infrastructure reform. Governments increasingly became aware that public ownership and the prohibition of competition fundamentally weakened the incentives for efficient provision of infrastructure. Further, inefficient infrastructure provision was imposing significant costs on the economy and pressure on government finances. Budgetary stress resulted in governments demanding better performance and greater returns from their public

enterprises (see for example, NSW Commission of Audit (1988), Blandy and Walsh (1989)).

By the late 1980s and early 1990s it became increasingly obvious that a national approach, covering the different levels of government, was required if the full benefits of infrastructure reform were to be achieved (see chapter 2). The Special Premiers Conferences and later the Council of Australian Governments (COAG) have been the principal mechanisms by which this broader reform agenda has been progressed. The second Special Premiers' Conference in July 1991, for example, amongst other things, reached agreement on the establishment a National Grid Management Council to manage eastern Australia's electricity grid.

The establishment of the COAG in May 1992, was a significant step towards facilitating a national approach to microeconomic policies and reforms, particularly infrastructure reforms. COAG has become the main body for discussions between heads of government on issues of national importance. The introduction of a national competition policy has been a fundamental reform in this context. COAG plays a crucial role in establishing plans to facilitate national networks in Australia.

4.3 Approaches to infrastructure reform

Budgetary stress as well as an increased understanding of the impact of poor GBE performance on international competitiveness led governments to change the nature of their involvement with GBEs. Governments have pursued a variety of approaches to infrastructure reform. Initially reforms were designed to overcome some specific problem in a particular GBE or infrastructure industry. This approach has tended to give way to a more systematic approach to reform. Administrative reforms, including strategies such as commercialisation and corporatisation which aim to place GBEs on a more commercial footing, are common. Pricing reforms have also been pursued, but to a lesser extent. In recent years, governments have increasingly sought to lift the performances of infrastructure industries by exposing them to greater competition. The agreement to implement national competition policy reforms represents a nationally coordinated and wide-ranging application of this approach. Privatisations, involving the transfer of ownership to the private sector, have also been used.

All three levels of government in Australia have pursued reforms to infrastructure industries and GBEs. The nature, extent and pace of the reforms have varied widely across jurisdictions, between infrastructure industries, as well as, between GBEs within industries. Some common approaches to reform have, however, emerged. These approaches can be grouped under five main categories:

- reforms in response to specific problems;
- administrative reforms;

- pricing reforms;
- reforms aimed at increasing competition; and
- privatisation.

In this section we discuss these five approaches to reform drawing on particular examples to illustrate the types of changes that have been implemented.

4.3.1 Reforms in response to specific problems

Governments in Australia have, in some instances, pursued reforms in response to specific problems, such as loss making activities, low productivity, overmanning, etc. These reforms generally involve one-off improvements in productivity. However, they do not necessarily result in changes which will automatically lead to on-going increases in efficiency or even the maintenance of initial improvements. Examples of these types of reforms include:

- efficiency drives within an industry or enterprise;
- the closing of uneconomic services; and
- the reduction of staffing levels.

This approach often treats symptoms rather than the primary causes of poor performance. A common feature of this approach is that, while it has the potential to increase efficiency, it does not fundamentally change the underlying incentive structure and so does not provide continued pressure for improvement.

Forsyth (1992, p. 12) has termed reforms of this type 'non-structural'. He states that this type of reform has a tendency not be long lasting and that areas reformed over two decades ago are again prime candidates for reform. While there are some important exceptions, governments have tended to shift away from these piecemeal approaches to those which seek to attack the real underlying problems.

Some aspects of the reforms to Australia's maritime industries are an example of this type of reform. In 1989, the Commonwealth Government initiated a three-year program of reform to the waterfront industry to improve its efficiency. This program included initiatives which might be termed 'non-structural'. For example, redundancy and retirement packages were offered to reduce stevedoring labour levels. The reform program, also contained 'structural' elements, such as the replacement of the pooled employment system with company based employment. The reforms did not, however, directly address the absence of a link between pay and labour productivity. The BTCE in its 1995 review of waterfront industry reform noted that while there have been many positive aspects to labour reform on the waterfront in terms of productivity, attitude, conditions and safety, negatives exist. These included:

- in some ports idle time is still too high and use of casual (supplementary) labour is too low;

- the present generous shift and overtime allowances greatly reduce the effectiveness of present incentive schemes (BTCE 1995a, p. 46).

The BIE's recent international benchmarking report on the waterfront found, that since late 1993, there was evidence of backsliding in Australia's performance in some areas of this industry (BIE 1995c). There has, however, been some improvement in the September 1995 quarter (appendix 2).

4.3.2 Administrative reforms

Administrative reform aims to achieve performance improvements without changing ownership or the market environment. Underlying this approach is a judgement that continued public production of particular goods and services is appropriate. The aim of administrative reform is to create a more commercial environment for GBEs.

Some of the administrative reforms pursued by governments in Australia include commercialisation, corporatisation, and the use of benchmarking and performance monitoring.

Commercialisation and corporatisation

Commercialisation involves reforming administrative procedures within a GBE. It can involve: better specification of objectives; preparation of business plans; introduction of financial targets (eg rate of return) and non-financial targets (eg service quality, productivity); reduced government involvement in day-to-day decisions; upgrading account keeping methods to full accrual accounting; and improved reporting requirements. It normally does not involve the appointment of a commercial board or the application of commercial disciplines faced by private corporations (e.g corporation law, Trade Practices Act, etc).

Corporatisation aims to replicate, more formally, many of the commercial and market disciplines faced by private firms, while retaining government ownership. The key elements of corporatisation include: the removal of factors that advantage or disadvantage GBEs compared with private sector companies; the separation of GBEs from the direct arm of government, including the removal of government day-to-day control over operational aspects of the enterprise; and the appointment of an independent board. The relationship between the GBE and government becomes one of a commercial board and a dominant shareholder. Legislation clearly specifies the powers and responsibilities of both parties. The board is usually held accountable for the performance of the enterprise by reference to financial benchmarks commonly used to assess the performance of private businesses, such as rates of return and dividend payments. Commercial disciplines are introduced either directly, or via legislation that attempts to mirror relevant arrangements for private enterprises.

Commercialisation and corporatisation have been the most widely adopted approaches to infrastructure reform in Australia. In practice there is often little to differentiate one

approach from the other and individual governments may not apply all the elements of each approach as described above. The timing, pace and rigour of these reforms also varies between governments. Examples of such reforms can be found in the electricity and gas industries, where many of the states have commercialised or corporatised their utilities. State governments have also moved to corporatise their port authorities and many of the state rail authorities have been given a more commercial focus.

Benchmarking and performance monitoring

A major part of the process of infrastructure reform has involved putting in place incentives and monitoring mechanisms to assess the performance of GBEs. Mechanisms that monitor GBE performance need to accompany reforms which give GBEs increased management responsibility and autonomy. In the absence of competitive disciplines, performance monitoring is necessary to ensure that GBEs are not abusing their market power by charging monopoly prices, restricting output or reducing the quality of their services.

Performance monitoring involves assessing the performance of GBEs against a range of both financial and non-financial targets and comparing them against their domestic and international counterparts. It also provides governments with a tool for promoting yardstick competition. Performance monitoring acts as a driver for further reform. It provides benchmarks which encourage the adoption of best practice techniques.

A key example of performance monitoring is the work being undertaken by the BIE on international performance benchmarking of business input services. The BIE's work was commissioned by the federal government in 1991. It looks at the performance of Australia's infrastructure service industries from the perspective of the business customer (e.g price and quality of service) as well as the service provider (e.g operating efficiency and productivity) relative to their international counterparts. Evidence of significant performance gaps relative to other countries makes it critical that performance monitoring is carried out relative to international best practice. Simply comparing performance domestically is not good enough. International performance monitoring keeps the focus on matching the performance of our competitors and provides a means for assessing the impact infrastructure services are having on the competitiveness of user industries. Further, it provides an impetus for reform efforts directed at closing performance gaps.

In recognition of its value, the federal government in *Working Nation* (Keating 1994a) extended and broadened the BIE's benchmarking work. Coverage of the BIE's infrastructure studies was expanded to include: water and core government services directly used by business. These services include workforce training, tax administration, the customs service, quarantine, health and safety inspection systems, environmental regulations and corporate governance. The overall benchmarking project was extended through to June 1999 (Cook 1994).

Many GBEs have also adopted benchmarking as a useful management tool following the impetus given by the work undertaken by the BIE. State governments also monitor their GBEs as part of the commercialisation and corporatisation process. The New South Wales government, for example, has published annual performance indicators on a comparable basis for its major GBEs since 1989-90.

The Steering Committee on National Performance Monitoring of Government Trading Enterprises (SCNPMGTE) supplements the international benchmarking work undertaken by the BIE. The committee undertakes national performance monitoring and, since 1993, publishes annual details of the performance of GBEs in Australia. The focus of the SCNPMGTE benchmarking work is on time series analysis, involving comparisons of accounting, economic and non-financial measures of performance for GBEs operating in similar activities in different states or territories of Australia. Unlike the BIE's work, the focus is a domestic one, essentially from the perspective of the owner of the GBEs — the government.

4.3.3 Pricing reforms

The adoption of efficient pricing should be a central feature of infrastructure reform. However, the move to adopt more efficient infrastructure prices has been slow, compared to the pace of other infrastructure reforms (BIE 1995d). Although some progress has been made in a number of areas of pricing reform, there are many key areas which remain to be tackled (see appendix 2).

The relatively narrow tax bases available to states and territories can act as an impediment to pricing reform. Governments may resist moves towards charging prices which fully reflect productivity gains as this restricts their ability to use infrastructure charges to raise revenue. For the same reason, governments' may also avoid adopting transparent regulatory regimes which limit monopoly pricing. Business users have expressed some concern that, to date, a disproportionate share of productivity gains from reform have been captured by governments, in the form of dividend payments rather than greater reductions in prices (Larkin and Dwyer 1995). Section 4.4.1 discusses infrastructure dividends in more detail.

Pricing reforms will improve the way in which resources are used. They involve moves towards ensuring that prices for infrastructure services more closely reflect their efficient cost of supply. For example, a number of water utilities throughout Australia have, in recent years, pursued pricing reforms which are moving prices closer to the user-pays philosophy. These reforms have seen a reduction in reliance on charges based on property values that have very little relationship to the amount of water used or the cost of its provision. In Victoria, for example, the adoption of a user-pays system has seen service provision charges based less on property values and more on water usage.

Pricing reforms aimed at achieving more efficient prices can delay the need for costly new investment to expand existing capacity. In some cases, this may necessitate price increases to promote efficient investment decisions and patterns of usage. For example, the user-pays system adopted by the Hunter Water Board in 1982 resulted in much slower growth in the demand for water. The board's next major dam, originally planned for 1985, has been deferred by more than thirty years (Broad 1991).

A central issue of pricing reform is the need to remove cross-subsidisation associated with funding community service obligations (CSOs). These cross-subsidies penalise some users (commonly industrial and commercial users) relative to others. This form of cross-subsidisation can distort decisions to consume, produce and invest. If GBEs are to be placed on a more commercial footing, the identification and isolation of CSOs becomes integral to achieving more efficient pricing structures. Pricing reforms will generally require that any CSOs are fully identified and costed. In some instances, governments decide to remove the CSO and its associated subsidy once it is made transparent and its costs clarified. In other cases, governments elect for their continuation. There are a number of options for funding CSOs including explicit funding through direct subsidies provided by governments. A discussion of the implications of alternative funding methods for CSOs is presented in BIE (1995d).

An examination of infrastructure pricing shows that in some areas cross subsidies are being reduced. However, there is considerable evidence that much more needs to be done in this area (see appendix 2).

Both New South Wales and Victoria have recently published policy statements relating to CSOs. In 1994, the New South Wales Government issued *A Social Program Policy for NSW Government Trading Enterprises*. The program sets down policy guidelines which will result in the effective separation of commercial and non-commercial activities of GBEs (NSW Government 1994). Under the new arrangements, CSOs are formally contracted between the GBE and the relevant ministers. The policy provides for GBEs to identify and cost CSOs which will then be funded through the budget. All social programs in New South Wales are to be funded from the budget within 2 to 3 years. The Victorian Government also announced its CSO policy in 1994 (Office of State Owned Enterprises 1994). The policy aims to identify and make accountable social and community programs undertaken by the state's GBEs.

In some instances, reforms aimed at encouraging GBEs to adopt a commercial focus have intensified pressures on enterprises to exploit their monopoly power by charging relatively high prices for their services. Some governments have established formal arrangements for monitoring and regulating GBE prices to help address this problem. For example, some Commonwealth-owned monopolies are subject to prices surveillance by the Prices Surveillance Authority (PSA), while Austel is currently responsible for administering price control arrangements applying to Telstra. The Australian Competition and Consumer Commission took over this surveillance role in

November 1995. Some state governments have also introduced varying forms of prices oversight or regulation. For example, the New South Wales Government established a Government Pricing Tribunal to review and determine maximum prices for the states' GBEs. The Victorian Government has established the Office of the Regulator-General to perform the function of an economic regulator for nominated industries. These regulatory authorities may provide some discipline on monopoly pricing. However, it is less clear that their policies, which often lack transparency, will lead to a set of efficient price structures or encourage GBEs to pursue efficient practices (BIE 1995d).

Reforms aimed at moving GBEs towards cost recovery and removing of cross-subsidies, should provide an environment which will encourage more appropriate pricing policies. However, where possible, governments should introduce complementary reforms designed to increase competition, such as removing barriers to entry, allowing access to essential facilities and vertical separation. Such reforms will help produce pricing structures which reflect efficient, rather than inflated costs of supply.

4.3.4 Reforms aimed at increasing competition

The focus of infrastructure reforms has increasingly turned towards promoting greater competition. Governments in Australia now widely recognise the benefits of promoting competition in the area of infrastructure. The key approaches to introducing or increasing competition include:

- removing regulatory barriers to entry;
- splitting GBEs into competing units;
- allowing third party access to essential facilities;
- integrating networks; and
- contracting out through competitive tendering.

These approaches to increasing competition are discussed below.

Removing regulatory barriers to entry

One of the greatest impediments to effective competition in the provision of infrastructure services has been government imposed restrictions on market entry. Australian governments in the past have created separate statutory monopolies to provide telecommunications, postal, water, rail, electricity and gas services. In recent years, governments have started removing statutory monopoly provisions that restrict competition in some areas. For instance, in several telecommunications and postal markets statutory monopoly rights have been removed and competition has been introduced. Other examples include the Commonwealth's decision to terminate the

two-airline agreement and the decision of a number of state governments to remove or substantially modify regulations requiring certain goods to be transported by rail.

More recently, as part of COAG's national competition policy, Commonwealth, state and territory governments have agreed to develop a schedule for reviewing existing anti-competitive laws and regulations that restrict competition. The agreement requires governments to amend all existing legislation which restricts competition by 2000.

Removing regulatory barriers to entry, however, may not always be sufficient to promote competition in an industry. In the case where a GBE is a natural monopoly (ie characterised by large sunk costs and significant economies of scale and scope) competitors are unlikely to enter the market. Also, if a GBE is vertically integrated, that is, owning and operating all elements of the production chain, it may restrict competition by charging higher than normal prices for competitors to access an essential facility (such as a transmission grid or railway track network.). This situation can be improved by splitting GBEs into competing units and developing transparent access regimes. Such regimes should require charges to be based on efficient costs of supply rather than 'padded' charges and/or uncommercial restrictions on operating flexibility. Reforms to overcome such impediments to competition are discussed below.

Splitting GBEs into competing units

Governments in Australia are currently splitting some monopoly GBEs along three lines.

The first approach involves separating regulatory responsibilities from the GBEs' commercial operations. The transfer of Telecom's technical responsibilities to Austel provides an example of this type of reform. Prior to 1989 Telecom (Telstra) was responsible for equipment and cabling specifications. The monopoly carrier restricted the scope for competition by only permitting its employees to install approved equipment and cabling for customer premises and network services. The reforms removed the technical responsibilities from Telecom and allowed new entrants to the market for attaching equipment to existing networks.

The second approach involves forming potentially competitive functions within a GBE into a number of independent businesses. For example, in Western Australia, the government has sought to introduce competition between electricity and gas by creating two new corporate entities to replace the State Energy Commission of Western Australia. The publicly owned Alinta Gas Corporation now operates the Western Australian gas transmission and distribution systems, while Western Power Corporation has assumed responsibility for the state's electricity system.

The third approach involves introducing competition by separating out natural monopoly segments of industries from potentially competitive activities. Natural gas in Victoria is a good example. The gas reform program initiated by the Victorian

government involves separating the Gas and Fuel Corporation of Victoria (GFCV) — a previously vertically integrated monopoly across transmission and distribution — into separate transmission (Gas Transmission Corporation) and distribution (Gascor) businesses.

Allowing access to essential facilities

Governments seeking to promote competition in infrastructure and related industries have recently given special attention to essential facility elements of infrastructure networks (e.g. gas and water pipelines, electricity transmission grids and telecommunications networks). Essential facilities exhibit natural monopoly characteristics. By allowing other operators to access an essential facility, the prospect of 'uneconomic' duplication of the network is reduced. Access to such facilities can, at the same time, promote competition in the provision of services reliant on using the network. For instance, the Australian *Telecommunications Act* creates a right for a carrier to connect its facilities to the network of any other carrier and to have its calls carried over the network. As part of the new national competition policy, a new access regime for certain infrastructure facilities commenced in November 1995.

Integrating networks

Recent inter-governmental initiatives have made moves towards establishing frameworks to integrate certain infrastructure networks. Examples of recent inter-governmental initiatives aimed at helping to integrate state and territory networks include:

- the development of arrangements for the management of water resources across jurisdictions;
- the integration of state rail networks, the establishment of the National Rail Corporation and the proposal to establish Track Australia as a national authority to manage access to the inter-state rail network;
- the agreement to remove restrictions on inter-state trade in natural gas; and
- the move towards integrating some state electricity networks with the aim of forming an electricity market for south east Australia.

The benefits from such initiatives have been extensively canvassed for several years or more. The integration of traditionally separate networks encourages competition between GBEs within and across jurisdictions, by allowing users to choose between infrastructure providers on the basis of least-cost sources of supply. Infrastructure providers must also compete on the basis of efficient costs of supply to provide new capacity.

To date, progress in advancing the development and operation of such networks within Australia has been relatively slow. In part, this undoubtedly reflects the challenges of agreeing on appropriate frameworks and operating mechanisms.

However, it also reflects in part the practical difficulties of dealing with inter-government rivalries and coming to grips with the associated competitive disciplines. The new national competition policy may help in this regard.

Contracting out through competitive tendering

Contracting out involves using a competitive tendering process to choose the most appropriate supplier. The main aim of this type of reform is to achieve savings related to differences in the operating efficiency of potential suppliers. A number of studies indicate that the use of contracting out can result in cost savings in the order of 20 per cent. In some instances it can result in even higher cost savings. For example, the competitive tendering of cleaning services in Sydney hospitals has resulted in savings of almost 30 per cent (Hilmer 1993a p. 194).

Moves to place GBEs on a more commercial footing have encouraged the use of contracting out. In these circumstances, in-house services have to demonstrate superiority over external contractors for the service to remain in-house. For example, the Melbourne Water Corporation contracts out many activities including repairs and maintenance, meter reading and inspections all of which were previously performed in-house.

Infrastructure providers, in some instances, have also contracted out the provision of subsidised services to improve their operating efficiencies. For example, the New South Wales State Rail Authority contracts out coach services for country passengers.

Capturing the potential benefits from competitive tendering requires a disciplined approach to the process. It is heavily reliant on being able to effectively specify the required services, efficiently assess competing bids relative to the alternative of in-house supply and monitoring delivery against contract requirements. In this context, it is important to fully account for the direct as well as the indirect costs in assessing potential savings.

4.3.5 Privatisation

Privatisation involves the transfer of ownership from the public to the private sector. Privatisation can be complete or partial — with government retaining some ownership rights and management control. Typically, a privatised GBE becomes exposed to normal commercial disciplines (e.g. conduct regulation such as the Trade Practices Act and Corporations Law, accounting conventions, taxation requirements, etc.) and market disciplines such as the threat of takeover, bankruptcy, the profit motive and sharemarket monitoring.

Privatisation, as an approach to reform, is based on the belief that economic performance will be improved by private rather than public ownership. This in turn is based on the fact that privately owned enterprises are subject to disciplines that cannot

apply to even fully corporatised public enterprises. Evidence from a number of studies of the comparative performance of public and private enterprises suggests that where there is effective competition, private enterprises operate more efficiently. However, in situations where market power may be exercised, the results are inconclusive (for a more detailed discussion of these studies see IAC 1989). This implies that the potential efficiency gains from transfer of ownership are likely to be seriously eroded if the GBE is transferred with existing market power.

Budgetary considerations may affect privatisation programs. For example, there may be some conflict for governments between maximising their return by selling a GBE as a monopolist and allowing competition in the market. This is because the revenue from the sale of a GBE with restrictions on competition will be greater than from a GBE operating in a competitive market.

According to Larkin and Dwyer (1995, p. 62), privatisation of GBEs could also be locking in inappropriately high prices for infrastructure services:

> Because infrastructure assets are seldom traded undertakings with large past investments, and because monopoly components will still remain under State or Commonwealth ownership, it is relatively easy to determine a value of the cost of assets which justifies the pricing policy designed to produce an 'acceptable' return. For example, the Victorian Regulator General is bound to have regard to the prices paid by new entrants into the industry for their utility assets. Thus there can emerge a chicken and egg situation whereby the more a bidder pays for a franchise licence, the greater the asset base which can be used to justify a pricing policy necessary to secure a return. Under such a scenario, governments could be said to be essentially selling monopoly rights to tax business and household consumers up to a point.

Until recently, moves towards privatisation in Australia have been relatively limited. The Commonwealth government has privatised some GBEs under its control, for example, Qantas and the Moomba-Sydney Pipeline, and partially privatised others, for example, the Commonwealth Bank. State governments to varying extents have also privatised some of their GBEs. For example, the South Australian Government sold its majority shareholding in SAGASCO Holdings, the state's gas utility in 1993. The Victorian Government has sold a number of the state's electricity businesses and is in the process of organising an extensive privatisation program.

4.4 Impact of infrastructure reform

While the motivations for infrastructure reform have varied, two stand out. First, reforms aim to improve the competitiveness of firms using infrastructure services. Second, reforms aim to reduce the budgetary stress that poorly performing GBEs place on government finances. This section briefly examines recent trends in GBEs' dividend payments to their owner governments. It also examines changes in the prices and quality of infrastructure services since the introduction of infrastructure reform.

4.4.1 Dividend payments

Infrastructure reform in Australia has seen the performance of GBEs improve since the mid to late 1980s. However, performance has varied significantly between industries and even between GBEs within industries (BIE 1994a, 1995b). Improved performance of GBEs is partly reflected in an overall increase in profitability of GBEs and an increase in dividend payments made to governments.

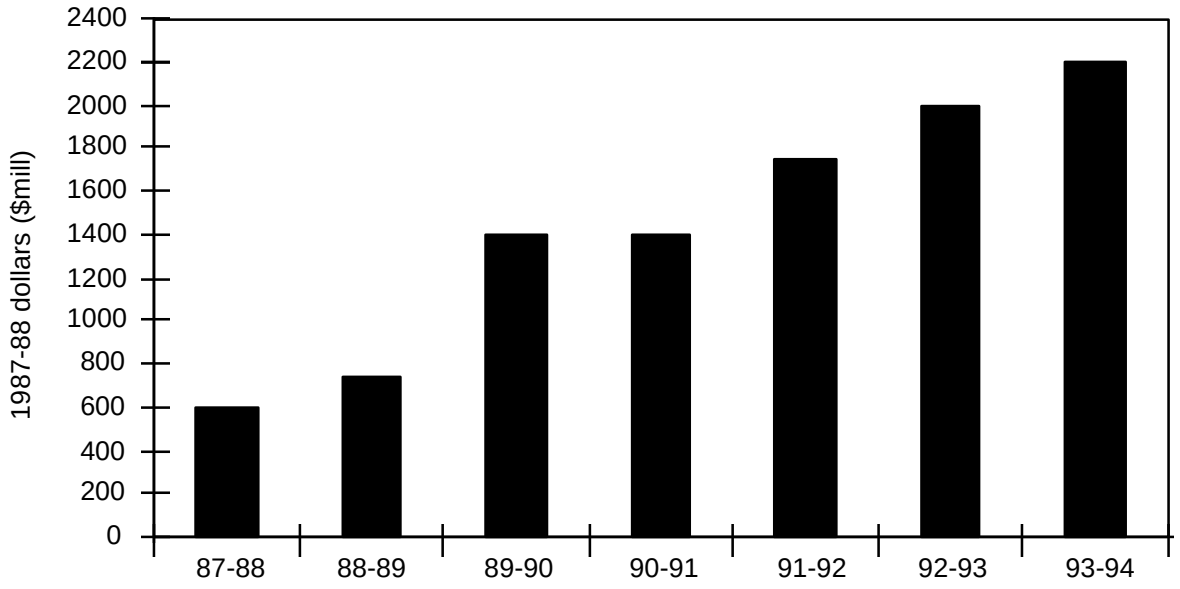
In aggregate, real dividend payments by GBEs have increased over the last seven years. The SCNPMGTE reported that dividends for the 59 GBEs it monitors more than tripled between 1987-88 to 1993-94. Dividend payments to governments increased in real terms (1987-88 dollars) from around $0.6 billion in 1987-88 to $2.2 billion in 1993-94 (figure 4.2).

The main contributors to this increase were the major Commonwealth GBEs (mainly Telstra) and the electricity supply industry which is principally owned by state governments. Dividend payments by other state-owned enterprises such as gas and water utilities and port authorities have also grown considerably — although these still comprise a relatively small proportion of the total. Rail and urban transport make no contribution to dividend payments and still require substantial subsidisation by governments.

The marked increase in real dividends paid by some GBEs is, in part, an outcome of governments encouraging GBEs to act commercially. However, some commentators have expressed concerns regarding the size of some dividend payments to governments. The largest increases in dividends have been evident for GBEs with the greatest market power (Clare and Johnston 1993). Specific examples of dividend payments by GBEs that exceed profits have also been cited in support of concerns about overpricing. For instance, in 1987–88, 1990–91 and 1992–93 the Gas and Fuel Corporation paid in excess of 100 per cent of their profit in dividends to the Victorian Government (SCNPMGTE 1995, p. 121).

While dividend payments have increased significantly, average real prices charged by GBEs have declined over the period (see Figure 4.3 below). This suggests that while governments have required some GBEs to make increased dividend payments, they have not, in the main, been funded by increased prices. However, even where prices have fallen, questions remain as to whether GBEs are producing efficiently and whether price reductions have been as large as they could have been. Business interests, for example, have contrasted the significant productivity improvements reported for GBEs with the relatively small declines in prices of their goods and services. They have concluded that the lion's share of productivity gains has not been passed on. Nevertheless, it should be recognised that it is entirely appropriate for GBEs to earn a commercial rate of return on their assets.

Figure 4.2 GBEs real dividend payments to governments, 1987-88 to 1993-94



Source: SCNPMGTE 1994, 1995.

The relatively narrow tax bases available to states and territories coupled with their substantial expenditure responsibilities can make their better performing GBEs particularly attractive investments. This imbalance can create resistance to exposing GBE infrastructure providers to competition. It also increases the incentive for governments to use some infrastructure charges to raise revenue. This is compounded by the nature of demand for infrastructure services. Generally, the demand for infrastructure services is less responsive to price increases than the demand for less essential and 'luxury' goods and services. These demand characteristics can tempt governments, as infrastructure owners, to overprice without incurring a more than proportional decrease in revenue. The lack of competition for many GBE-provided infrastructure services has prevented consumers from switching to alternative suppliers (BIE 1995d). Reforms such as those designed to break GBEs into competing units and the introduction of third party access regimes should help reduce incentives to price excessively.

State and territory governments may also view infrastructure pricing (e.g. of electricity and water services) as one of the few broadly based revenue raising instruments at their disposal. As they are broadly based, the direct costs of raising revenue via inflated infrastructure prices can be spread widely across many users. While using infrastructure prices to raise revenue can be distortionary, the alternative — manipulating the existing narrow tax base — may be more inefficient. Broadening state and territory tax bases may reduce pressures to price infrastructure services to achieve fiscal goals. However, past High Court decisions have restricted the ability of individual state and territory governments to broaden their tax bases (BIE 1995d).

A recent study undertaken for the BCA expressed a number of concerns about the tendency for dividends paid by GBEs to emerge as a new form of indirect taxation. To the extent that these dividends include such a tax element they are likely to adversely impact on international competitiveness. Amongst other things, the study observed that:

> Unlike indirect taxes, user charges cannot be rebated for exporters without breaching the GATT subsidy code. Exporters would be better off if Treasuries raised revenue via explicit indirect taxation which could be rebated, instead of disguised indirect taxation through user charges which cannot be rebated. Given that most countries rebate their indirect taxes through VAT refund arrangements, it is a real concern if Australia adopts infrastructure pricing policies which undermine export competitiveness (Larkin and Dwyer 1995, p. 61).

Competition policy and related reforms applying to the provision of infrastructure services are conducive to more efficient infrastructure pricing and, consequently, to commercially justifiable dividends. The April 1995 COAG agreement on a national competition policy (see chapter 2), for example, should ensure scrutiny of proposals to shelter infrastructure providers from competitive pressures. However, while the Commonwealth, states and territories have reached agreement on the distribution of the benefits of the COAG reforms, the majority of the reforms are yet to occur. Indeed, it will be many years before the benefits of reform are realised, although some of the associated costs will accrue much earlier. It is therefore important that the reform process is closely monitored to ensure that benefits are actually delivered (BIE 1995d).

4.4.2 Prices and quality of infrastructure services

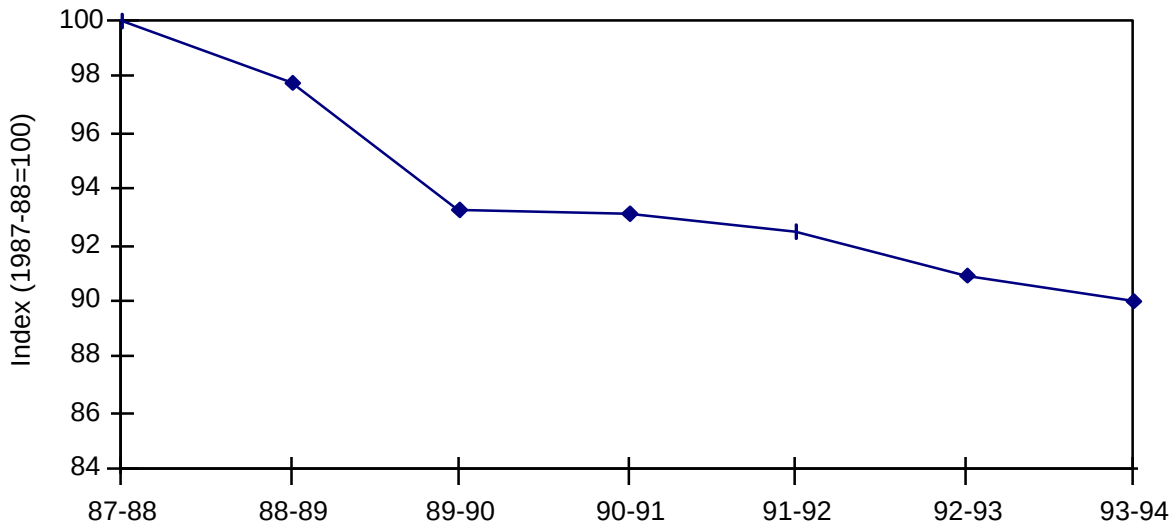
During much of the 1980s, prices of many infrastructure services rose or remained fairly constant in real terms. Postal and gas charges, for example, rose largely in line with the consumer price index. However, electricity prices and urban transport charges increased at a faster rate than inflation. Telephone charges were the exception, increasing at a rate significantly below the rate of inflation (IAC 1989). With the introduction of infrastructure reforms, the real prices for many infrastructure services have declined. Aggregate GBE prices have fallen in real terms by around 10 per cent between 1987-88 and 1993-94 (see figure 4.3).

The overall pattern of declining real prices, however, masks some wide variations within and across industries. Appendix 2 examines how the prices and the quality of service in individual areas of infrastructure has changed in recent years. Australia's performance, compared with world best practice, is also examined. The infrastructure industries covered include: electricity, natural gas, water, telecommunications, waterfront, coastal shipping, aviation, rail and road freight.

In some industries, the reform process has been successful in reducing real prices. For example, aviation reform has led to real domestic airfares falling by more than 10 per cent. Reforms underway in the electricity generation, transmission and distribution

sector also appear to have provided real benefits (in the form of lower prices) to industry. In other instances, the reform process has induced real price increases. In the water industry, for example, reforms aimed at more closely aligning prices with the cost of supply have resulted in real price increases. Pricing reforms aimed at reducing cross-subsidies have also seen prices for some customer classes increase. Overall, reductions in non-commercial cross subsidies have seen residential or domestic users pay relatively more while business users have generally gained. However, there is evidence that much more can be achieved in this area (for example, see electricity discussion in appendix 2).

Figure 4.3 Real aggregate GBE prices, 1987-88 to 1993-94



Source: SCNPMGTE 1994, 1995.

There is also evidence that the quality of service of some infrastructure industries has improved in recent years. For example, the BIE (1995e) found that there has been some improvement in the reliability of the telecommunications network since the introduction of competition.

In a number of areas (e.g. waterfront charges for coal handling and road freight rates) Australia's prices are at or near world best practice. Despite the evidence of some success, the BIE's international benchmarking work suggests, for many infrastructure services, more is required. As noted in the BIE's most recent overview of the performance of Australia's infrastructure industries, large differences between many of our infrastructure prices and the cheapest prices internationally continue to be observed (BIE 1995b). A similar story emerges for quality of service indicators. Despite the evidence of improvements in some areas, there continues to remain a significant gap between Australia's performance and achievable world best practice in many areas (see appendix 2).

Unfortunately, for some infrastructure industries, the 'success' of some reforms has been short lived. Waterfront reforms appear to fall into this category. The BIE has found that Australia's performance on the waterfront in the recent past is mixed and, in some instances, backsliding is apparent (see appendix 2 and BIE 1995c). This result is despite the high priority and substantial funds assigned waterfront reform by Australian governments.

Aviation may be another area where the reform process has delivered benefits to industry and then seen a deterioration in some aspects of service quality. Domestic airfares have declined substantially since the removal of the two airline policy and the introduction of competition (see appendix 2). Nevertheless, to some extent these cost savings can be offset by the costs associated with waiting at airports for delayed flights. The BIE's latest examination of Australia's aviation performance (BIE 1994d) suggested that Australia's performance had improved on earlier years, in terms of price and flights arriving and departing on time. There is, however, evidence to suggest that performance in this sector then regressed for a period (appendix 2). The BIE plans to update its international benchmarking work on aviation in 1997-98.

4.5 Concluding comments

Infrastructure and related industries are a significant part of the Australian economy. Their performance has significant implications for the economy as a whole. The costs and quality of infrastructure services, in part, determine the competitiveness of Australian business. It is therefore essential that infrastructure services are priced and delivered as efficiently as possible.

In the mid to late 1980s there was widespread evidence of large performance gaps in these industries and recognition of the need for reform. This need was made more urgent by other micro-economic reforms which were opening the economy up to international competition.

Governments at all levels in Australia have made progress in improving the performance of their infrastructure industries and GBEs since the late 1980s. However, the nature, extent, pace and success of these reforms have varied widely across governments and between sectors and GBEs.

Infrastructure reform has lifted the performance of GBEs, in some cases significantly. Overall real prices for services provided by these GBEs have fallen, and dividend payments to governments have increased. However, the performance of GBEs has varied between industries and between GBEs within industries. In some instances, the reform process has been successful in reducing prices and improving quality of infrastructure services. Electricity and telecommunications fall into this category. In other cases, for example water, infrastructure prices have increased, reflecting the reform process and the reduction of non-commercial cross subsidies. In other

instances, the impact of the reform process has been positive but, appears to be short lived, with some aspects of performance improving for a time before sliding back. Some elements of the waterfront appear to fall into this category.

The experience so far suggests that reform of infrastructure is a complicated process. In some cases, it involves the letting loose of potential monopolies. If not adequately controlled, this can lead to infrastructure owners reaping all the benefits of reform as monopoly dividends. The incentive for infrastructure owners to monopoly price can be even more of a concern if the owners, in many cases state governments, have limited alternative avenues to raise revenue.

In some cases infrastructure reforms may not go far enough. Reforms can sometimes focus on the symptoms rather than the real problem. There is the real prospect of backsliding if reforms fail to create the incentives for continuous improvement in cost efficiency and service provision.

While there is evidence of significant improvements in the performance of GBEs, much remains to be done. The BIE's international benchmarking work has revealed that in many infrastructure industries Australia is performing well below achievable international best practice. And, although prices in many of Australia's infrastructure industries have been falling in recent years, prices elsewhere in world have also been declining — in some cases at a faster rate. Moreover, our record in lifting the quality of infrastructure service, relative to achievable world best practice, has also been mixed.

As the costs and quality of infrastructure services impact on the competitiveness of Australian industry, it is essential that the momentum towards efficient pricing and delivery is maintained. Vigorous implementation of the National Competition Policy will be important in achieving that aim.

5 Industrial relations and workplace reform

Centralised institutional arrangements have traditionally exerted a significant influence over how Australian firms manage the pay and conditions of their workforce. By the mid 1980s this centralised award-based approach came increasingly into question. At that time, Australia's challenge to improve its international competitiveness acquired new urgency. This gave momentum to a push for greater and faster change throughout the domestic economy, including the labour market (see chapter 2). This reflected a recognition that:

> The labour market directly or indirectly affects all other parts of the economy. It is therefore at the centre of the microeconomic reform debate (Borland et al 1992, p. 122).

Growing interest in labour market reform was also fuelled by inter-dependencies between different elements of microeconomic reform. As discussed in chapter 3, historically there has been a connection between Australia's tariff system and our approach to wage fixation. The process of trade liberalisation during the 1980s stimulated debate about the need for a more market oriented industrial relations and workplace environment.

Governments, industry groups and unions, to varying degrees, differed in their proposals for reform. However, there was general agreement that any new arrangements should facilitate more flexible outcomes — that is arrangements should be less centralised and more work place relevant. This recognition led to greater scrutiny of the institutionalised industrial relations process. The search for better ways of working has been an iterative process of experimentation, evaluation and further reform. Inevitably the pace of reform has not been acceptable to all — too far reaching for some, entirely appropriate for others, while some others consider it far too slow.

In this chapter we survey the main reforms affecting how firms use their human resources. Section 5.1 provides a brief background to Australia's industrial relations system. Section 5.2 examines some of the more significant federal reforms to the labour market and notes some substantial differences in the approaches' states have taken to industrial relations. It also includes a comment on issues relating to the future development of the industrial relations system. Section 5.3 reviews some of the reforms to training and employment programs (particularly those contained in the Commonwealth Government's 1994 *Working Nation* statement). In section 5.4 we discuss some of the reforms aimed at lifting business management to best practice standards. A concluding comment is presented in section 5.5.

5.1 Australia's industrial relations system

The Constitution sets out the basic framework for much of Australia's industrial relations system. It gives the Commonwealth Government powers to legislate for the prevention and settlement of industrial disputes that extend beyond the borders of one state. The formal system, historically, has been centralised and legalistic. By its nature, it has also been adversarial, revolving around compulsory conciliation and arbitration of industrial disputes. In addition, an informal system has always operated in which employers, unions and employees negotiate and resolve disputes without the assistance or intervention of any industrial tribunal.

The Australian Industrial Relations Commission (AIRC) and its predecessors were established as the vehicle for exercising these conciliation and arbitration powers. They have had a major role in determining specific awards and conditions of employment for a large proportion of the Australian work force. State tribunals also act on industrial relations matters within their borders. Generally, state tribunals followed the AIRC's wage fixing principles.

Australia's wages system has centred around the decisions or 'awards' made by these tribunals in the settlement of industrial disputes. Crafts and occupations were originally the focus of these awards, rather than the enterprise or industry. This largely reflected the historical origins and structure of Australia's unions. Consequently, the same award can apply to a range of workers in different firms and across different industries. Over time there has, however, been a shift to a greater industry focus.

In 1985 over 5 000 awards existed, covering about 5 million employees or 85 per cent of the workforce. Award coverage was comprehensive in the public sector (98 per cent) compared with 78 per cent in the private sector. Of the total estimated workforce, federal awards covered 33 per cent, around 50 per cent were under state awards and 15 per cent had no award coverage (ABS 1988). The latest data, for May 1990, suggests little change occurred in the intervening period.

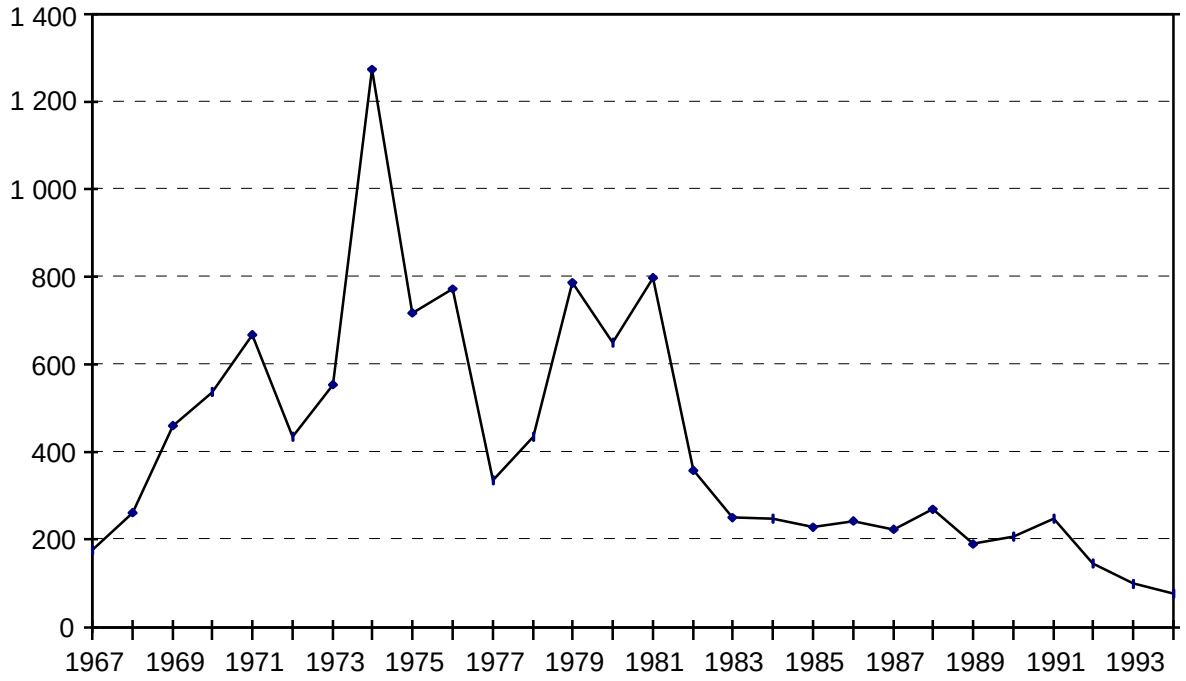
Because awards have a quasi-legal status as the outcome of a dispute, they tended to become entrenched and amenable to change only with further disputation. Historically, Australia's level of industrial disputation has been relatively high (see, for example, Hancock 1985). Disputation, measured as working days lost per 1 000 employees, peaked in 1974 (see figure 5.1). Australia's management practices were often a factor behind this high level of disputation — managerial policy, along with wage issues, was a major cause of industrial disputes (ABS 1995c).

Some key elements of Australia's centralised industrial relations system were the target of wide ranging criticisms, particularly from employers (see, for example, CAI 1984, ACC 1984). Some specific criticisms of the system in the mid 1980s were that:

- the coverage of so many different awards had institutionalised restrictive work practices and reduced enterprises flexibility to change in response to market pressures;

- a multiplicity of trade unions representing the firms' different employees increased the costs of negotiation and encouraged demarcation disputes; and
- relative wages were rigid and compressed, making it difficult to link remuneration to performance.

Figure 5.1 Industrial disputation in Australia, 1967 to 1994 — working days lost per thousand employees



Source: ABS (1995c).

None of these criticisms is uncontroversial. For example, the Organisation for Economic Co-operation and Development (OECD) considered:

> Compared to other OECD countries, Australian labour markets are in some respects already reasonably flexible. Real wages have adjusted fairly rapidly to changes in unemployment levels. Labour mobility and turnover between firms appear to be high by international standards ... [while] layoffs face no official constraints, periods of notice are relatively short and overly generous termination or redundancy provisions are not widespread in awards (OECD 1990, pp. 57, 67-8).

Since March 1983, a series of eight Accords between the Federal Government and the Australian Council of Trade Unions (ACTU) has supplemented the wage setting process (see box 5.1). These Accords have provided a policy framework, with ACTU members agreeing to restrain their pursuit of wage increases to levels consistent with the Government's macroeconomic targets, covering inflation and employment. In exchange, the government has made commitments to equitable economic policies which underwrite a 'social wage'. Examples of this have occurred in policies on taxation, superannuation, health insurance and job creation. The Accord has progressively evolved since 1983 to accommodate a more decentralised approach, involving workplace bargaining (see, for example, ACTU 1993).

Box 5.1 The Accords, 1983 to 1995

On assuming federal government in 1983, the Australian Labor Party instituted a policy accord with the Australian Council of Trade Unions (ACTU). The parties have progressively modified and updated the Accord to meet the changing circumstances of the economy. Accord Mark I aimed at tackling the problems of inflation and unemployment simultaneously, while working to restore profit share to business. It provided for the maintenance of real wages through full wage indexation for cost-of-living (price) inflation.

In 1985-86 a sharp depreciation of Australia's currency saw a change in the emphasis of the accord in order to avoid higher import prices flowing through to wage settlements (see chapter 2). Under Accord Mark II, implemented in September 1985, the parties negotiated a deal which discounted full wage indexation through a wage-tax-superannuation package designed to preserve real after-tax incomes. It stressed the importance of the government restraining prices through the Prices Surveillance Authority.

Accord Mark III, implemented in March 1987, supported the AIRC's two tier system for wages and abandoned full wage indexation. In addition to the first tier of generally available wage increases, workers could negotiate a second tier of additional wage increases as a trade-off for productivity enhancing measures at the workplace.

Accord Mark IV, implemented in August 1988 supported the AIRC's award restructuring process, which encouraged further measures to improve efficiency and provide workers with access to more varied, fulfilling and better-paid jobs. The award restructuring process aimed to encourage multi-skilling and minimise demarcation disputes.

Accord Mark V, implemented in August 1989, aimed to secure wage restraint at a time of overheating in the macro economy. It combined moderate wage increases with substantial cuts in personal income tax and improvements in the social wage, thereby raising real disposable income. It also included agreement on the need to continue the award restructuring process.

Support for award restructuring continued with Accord Mark VI (February 1990), which relied on a wage-tax-superannuation trade-off to maintain wage restraint. Building on the workplace changes made through award restructuring, the Accord supported enterprise bargaining to enable more flexible and productive ways of working at the enterprise level.

Accord Mark VII (March 1993), titled Putting Jobs First, was the parties' response to recession and worsening unemployment. The Accord aimed to create 500 000 new jobs during the years 1993 to 1996. It continued to support a movement to decentralised wage fixation. A major feature of this Accord was the government's commitment to an arbitrated safety net for lower paid workers who did not derive any gains from enterprise bargaining.

Accord Mark VIII (June 1995) re-affirms the parties' commitment to a decentralised wages system. It provides for a set of four safety net adjustments for low wage earners over the duration of the Accord (1995-1999). The ACTU has committed to wage growth consistent with the government's target of an underlying inflation rate around 2 to 3 per cent over the course of the business cycle. The government, in turn, has raised its target for employment growth to 600 000 over the next 3 years. A feature of the Accord's social wage was the government introducing a new means tested maternity allowance.

Australia's industrial relations climate has seen a substantial improvement in industrial disputation since 1981. The number of working days lost through industrial disputes per thousand employees fell from almost 800 in 1981 to a record low of 76 in 1994 (figure 5.1).

5.2 Industrial relations reforms

The Commonwealth, via legislation and AIRC decisions, has pioneered a sequence of significant industrial relations reforms since 1987. These reforms have introduced more flexibility into the process of determining wages and conditions. The initial approach was to adopt a two tier wages system. However, a program of award restructuring and incentives to implement workplace reforms quickly replaced this system. Later, a decision to encourage further decentralisation, via enterprise bargaining, superseded these arrangements. Formalised enterprise agreements, underpinned by an award safety net are now the primary instruments for regulating wages and conditions.

5.2.1 Two tier system

The shift away from centralised wage fixation began in March 1987 with the two tier system established by the AIRC. This experiment with productivity based wage setting was supported by Accord mark III. The first tier involved provision for an across-the-board wage increase (based on traditional equity and cost of living considerations). A second tier offered the prospect of pay rises — up to a limit of 4 per cent — in exchange for productivity improvements which met the AIRC's restructuring and efficiency principle (REP). The REP emphasised (but did not confine itself to) changing restrictive work practices. The resultant cost savings or 'offsets' constituted the productivity gains basis for wage increases under the second tier. State tribunals adopted substantially the same system.

To have such cost offsets ratified, employers and unions submitted agreed changes to the AIRC for alteration of the relevant award provisions (commonly as an enterprise specific annexe to the award). In a significant departure from the centralised tradition, 'most second tier agreements were settled at the enterprise level' (McDonald and Rimmer 1988, p. 482). Nevertheless, the AIRC played an extensive role in the two tier bargaining procedures:

- it provided a framework under which the parties bargained;
- it provided a conciliation and arbitration service to any parties who became deadlocked during the bargaining process; and
- it imposed a penalty on any unions requiring arbitration by splitting the available increase into two phased instalments — to discourage the parties from relying on arbitral mechanisms (Romeyn 1994, p. 10).

Hence, the two tier system, while providing some improvement in workplace flexibility, remained firmly within the centralised and legalistic system of wage determination.

The spread of second tier wage increases varied considerably across awards, with employees in small firms less able to negotiate increases because of their limited bargaining resources. This may have reflected the 'go-it-alone' approach individual unions took to the process, rather than coordinating their negotiations (McDonald and Rimmer 1988). Employers with few or no union members made little use of the REP (Romeyn 1994). Large, single union, single award enterprises, particularly in the public sector, were most successful in negotiating second tier rises.

The most frequent offsets achieved under the REP introduced greater flexibility into working hours. For example, they frequently extended the span of hours during which employees could work at ordinary time rates or changed overtime arrangements (DIR 1990, Rimmer and Zappala 1988).

The second tier negotiations also allowed for the removal of a variety of restrictive work practices, for example, permitting greater job sharing and employment of casual labour (Macken 1989). However, many offsets were once-off savings and therefore represented short term gains. Some firms reached agreements covering task broadening and the associated issues of training and demarcation disputes, but the extent varied considerably across industries (Rimmer and Zappala 1988, Frenkel and Shaw 1989).

Just as significant as the productivity gains achieved through cost offsets was that the design of the REP successfully introduced some flexibility to previously established wage differentials. It did this by discouraging the automatic flow-on, from primary to secondary awards, of wage increases across industries/unions (McDonald and Rimmer 1988). But such disturbances to wage relativities — both between industries and between employees at the same workplace who were subject to different union coverage — may have come at the cost of some industrial disputation (McDonald and Rimmer 1988).

There appear to have been real gains under the two tier system. However, a review by the AIRC considered there had been a short-term focus on cost-cutting measures which prevented more far-sighted workplace reforms (Commonwealth of Australia 1991). The AIRC also suggested that many firms may have exhausted the scope for further trade-offs under the REP (Macken 1989).

Insofar as it focused attention on productivity enhancing measures at the workplace, the two tier system initiated 'genuine attitudinal change' (Rimmer and Zappala 1988, p. 588). Despite the significant progress made under this system, McDonald and Rimmer (1988) point out that the reforms highlighted substantial problems and constraints to further flexibility in the award structure.

5.2.2 Award restructuring and the structural efficiency principle

The AIRC examined the issue of the lack of flexibility in the structure of awards at the August 1988 national wage case. Building on the REP, it made the structural efficiency principle (SEP) the basis for a second phase of reform.

The SEP made wage increases available to unions which committed themselves to a fundamental review of their industrial awards, described as award restructuring. The government supported the SEP because it addressed 'objectives of improving industry efficiency and providing workers with access to more varied, fulfilling and better paid jobs' (DIR 1989, p. 19).

The AIRC expanded upon the SEP in the August 1989 national wage case decision. The Commission listed some specific workplace reforms for employers and unions to consider in the award restructuring process. These included:

- compensating overtime with time off;
- flexibility in arrangements covering hours of work, including wider daily span of ordinary pay hours and job sharing;
- rationalising the taking of annual leave to maximise production; and
- developing consultative procedures to deal with day to day matters of concern to employers and workers.

A further key element of the award restructuring process was the minimum rates adjustment exercise. This aimed to provide a safety net of consistent minimum wage rates across awards. It involved modernising classification structures and adjusting pay relativities within and between awards. The most common changes arising from award restructuring were: reductions in the number of job classifications; establishment of new skills-related career paths; and multi-skilling.

The extent of award restructuring varied across industries, with the pacesetter industry being the metals industry, where the Metal Trades Industry Association and unions implemented a number of important changes to work practices (box 5.2).

Still and Mortimer (1993) studied the relationship of award restructuring and training policy in large and medium firms in New South Wales. They found greater organisational change had followed award restructuring in large firms than in medium sized firms. The authors attributed this difference to larger companies being 'more pro-active and structured in terms of their identification of training needs' (Still and Mortimer 1993, p. 99). This may have been due to larger companies having their own training departments. Where award restructuring had taken place, they found the most affected groups in both firm categories were production personnel, clerical staff, technical staff and supervisors.

Given the structure of awards, negotiations necessarily took place at the industry/union level rather than at the level of the firm. However, some commentators

argue that this process was an important step in the move to enterprise bargaining. For example, Romeyn notes award restructuring:

> laid the groundwork for a greater workplace focus, by making awards more flexible and relevant, including through the use of facilitative provisions and the introduction of enterprise flexibility clauses, and by encouraging consultative mechanisms to be established (Romeyn 1994, pp. 10-11).

Box 5.2 Award restructuring in action: the metal industry

In 1989 the parties to the federal Metal Industry Award varied the award's provisions under the SEP to:

- incorporate a new 14 level, broadly based classification structure designed to increase the skills base of the industry, provide an opportunity to redesign jobs and establish career paths;
- rationalise award wage relativities;
- require the establishment of enterprise-based consultative mechanisms and procedures;
- enable the employer to direct employees to perform any work within their skill, competence and training provided it does not lead to de-skilling or compromise safety. This was an important tool in eliminating demarcation based on union membership and job function;
- require a training program to be developed having regard to the current and future skill needs of the enterprise;
- allow for training to be undertaken on and off the job on the basis that any training undertaking during working hours shall be without loss of pay;
- introduce an "enterprise flexibility clause" designed to enable the parties at the enterprise to make an agreement on any measure designed to increase efficiency subject to meeting certain conditions;
- enable a more flexible application of key award provisions relating to hours of work, shift work, meal breaks, annual leave and annual close-downs; and
- include a provision for adult apprentices (MTIA 1990, pp. 1-2).

Another important benefit from this process was the experience it gave employers and employees in developing some of the expertise needed to progress later to workplace bargaining. Not all parties benefited, however, as many unions and (smaller) firms found they could not devote sufficient resources to managing what were often protracted negotiations (Macken 1989).

Award restructuring highlighted the significant transaction costs associated with bargaining where small unions and employers are involved. There were also concerns

that the multiplicity of unions in Australia led to increased disputation and could hinder workplace bargaining. In response to these concerns, the government enacted legislation to encourage union amalgamations (see box 5.3).

5.2.3 Key developments in enterprise bargaining

In March 1989 the *Industrial Relations Act 1988* came into effect. As well as updating the federal industrial system's institutions and streamlining its processes, it attempted to provide a more effective framework for the achievement of industrial relations reform. The Act provided for enterprises to reach fixed term certified agreements. These certified agreements did not necessarily have to conform to the AIRC's wage fixing principles. However, the Act applied a public interest test to such agreements.

The AIRC required that a number of conditions be met before it certified an agreement. These were that the agreement must:

- be justified on its merits;
- relate to special and isolated circumstances; and
- not circumvent general wage fixing principles or threaten the orderly operation of the industrial relations system (Romeyn 1994).

In applying these conditions, the AIRC refused to approve a number of agreements. As a consequence, enterprise agreements were effectively restricted to a small range of short term agreements designed to supplement an award, rather than replace (for that particular enterprise) the terms and conditions of an award (Plowman 1993).

The AIRC's October 1991 decision opened the way to further steps towards the decentralisation of industrial arrangements, particularly wage determination. In its 1991 decision, the AIRC amended its wage fixing principles to allow for enterprise bargaining in the federal system. These agreements had to satisfy the AIRC's new enterprise bargaining principle, which required:

- enterprise agreements to be based on a broad agenda;
- wage increases to be based on the 'actual implementation of efficiency measures designed to effect real gains in productivity';
- a 'single bargaining unit' to negotiate agreements at the enterprise level;
- a commitment to no further pay increases, other than through any subsequent national wage case decisions;
- retention of basic award standards in relation to hours of work, annual leave etc; and
- fixed term agreements, not be subject to re-negotiation while still active.

Box 5.3 Union amalgamations

The origins of Australian unions were typically in crafts or occupations, rather than enterprises or industries. In June 1988 there were 308 state and federally registered unions. Many unions had less than 1 000 members, with the result that union representation generally increased with the number of employees in a firm. In 1989-90, workplaces with over 500 employees had an average of six unions (AWIRS 1991).

Drago *et al* (1992) have suggested this spread of representation fragmented workplace bargaining efforts, contributed to demarcation disputes and lower productivity compared with single union workplaces. It may also have retarded skill development by confining workers to a relatively narrow range of tasks.

The Commonwealth's 1990 (Section 118) amendments to the *Industrial Relations Act 1988* encouraged a greater industry orientation by unions. By raising the minimum membership level for unions from 1 000 to 10 000, the changes sought to reduce the number of federally registered unions. Unions also received financial assistance to progress the costly transition to amalgamation. The new provisions encouraged and hastened voluntary amalgamation by existing unions, while retaining their community of interest. The single bargaining unit requirement of the enterprise bargaining principle (discussed in section 5.2.3) re-enforced the incentive. These Commonwealth initiatives supported a drive for union rationalisation which came from within the union movement, led by the ACTU.

Through voluntary amalgamations the number of federally registered unions fell from 148 in June 1988 to 47 unions at 30 June 1995. The ACTU estimates that 20 of these unions cover over 95 per cent of federal registered union employees. While this resulted in the amalgamation of many smaller unions, it did not have an immediately pronounced effect at large workplaces. A Business Council of Australia survey of its members indicated that the average number of unions had fallen from 4.8 in 1988 to 3.6 in 1992 (Hilmer 1993). The overall number of state and federally registered unions fell to 157 in June 1994. Recent decisions by the AIRC which require the insertion of majority clauses, enterprise flexibility clauses and facilitative provisions to access safety net adjustments may help mitigate the effects of multiple union and award coverage.

While the number of federally registered unions has fallen significantly, the impact of union amalgamations in increasing the flexibility of the labour market remains unclear. According to the Industry Commission:

> Union amalgamations may contribute, at one level, to a more flexible and adaptive workforce by increasing the range of tasks that employees can perform and reducing demarcation disputes. But amalgamations could also lead to greater centralisation of negotiations and standardisations of settlements — a direction that would tend to thwart enterprise flexibility (IC 1990, p. 13).

Time will tell whether the centralisation benefits from amalgamated unions outweigh these potential costs to enterprise flexibility.

All state industrial tribunals introduced arrangements reflecting the key elements of the AIRC's enterprise bargaining principle (box 5.4 discusses the main thrust of state industrial relations reform).

Box 5.4 The states' approach to enterprise bargaining

All states have followed the Commonwealth's example in legislating to encourage enterprise bargaining. Most states have adopted similar systems to the Commonwealth but Victoria and Western Australia have diverged. The Australian Capital Territory and the Northern Territory come under the Commonwealth's legislation. For a more detailed description of state workplace bargaining legislation, see Commonwealth of Australia (1994a).

Under Victoria's *Employee Relations Act 1992*, all state awards expired on 1 March 1993. The government replaced these awards with a system of contractual employment agreements (either collective or individual). However, if the employee and employer mutually agree for their relationship to remain subject to an award, then 'opting in' to the award system is still possible. The Victorian Government also abolished compulsory arbitration and outlawed most forms of industrial action. It invested general conciliation and arbitration powers in the new Employee Relations Commission. The commission may only exercise its powers with the consent of all parties. Contractual agreementsunder this system appear to have achieved only limited coverage to date. DIR (1995b) has estimated that, since about 1991, 373 000 Victorian workers have exited the state system and moved to federal awards. Revisions to the Commonwealth legislation assisted this exodus. The Victorian Government responded in October 1994 by introducing a process for minimum wage setting, in order to stem the outflow of state workers to the federal jurisdiction (Reitano 1995). However, the government has also encountered difficulties in implementing the streamlined minimum wage system it envisaged. Thus, in June 1995 the Employee Relations Commission decided to reinstate the thousands of old state award pay rates in order to allow time for employer submissions before settling the issue(Davis 1995).

Western Australian legislation, since 1 December 1993, has allowed 'opting out' of the state award system to a 'workplace agreement' stream. It suspends the relevant award for the duration of an agreement, but revives the award on expiry or cancellation of the agreement. As in Victoria, agreements are contractual and may be collective or individual. The decision to move to the alternative workplace agreements stream requires the mutual agreement of employers and employees and the existing award system remains in place. The new legislation constrains the role of unions in the negotiation or ratification of workplace agreements and diminishes their previous rights of employee representation (Keirath 1995). During 1995, the WA government has encountered difficulties in implementing its so-called 'second wave' of reforms, through which it has attempted to reduce the influence of unions and their role in WA's system.

Both the certified agreement route and the AIRC's enterprise bargaining principle route focused on awards and required the involvement of unions. Hence, non-union enterprises were effectively excluded from the federal enterprise bargaining process.

The Commonwealth Government, concerned with the slow take up of enterprise agreements, under the Industrial Relations Act's certification process and the AIRC's new enterprise bargaining principle, amended the legislation. The 1992 amendments created a new division, Division 3A, to further facilitate enterprise agreements. The amendments removed the public interest test for certified agreements and replaced it with a 'no disadvantage' test. The amendments also added a number of other statutory tests relating to consultation, dispute settling provisions and the use of single bargaining units. The AIRC, when certifying an agreement, could not scrutinise the agreement's productivity measures or wage increases. The amendments introduced greater flexibility in the determination of agreements at the workplace, increased the bargaining parties' responsibilities and limited the scope of the AIRC to intervene in the bargaining process.

Regarding the 1992 amendments, the Commonwealth Government, in a 1993 submission to the AIRC, said:

> The intent was to ensure that certified agreements were available as a real alternative to the mainstream award system and not reserved for exceptional circumstances (Commonwealth of Australia 1994b, p.18).

The new legislation required the AIRC to apply the following criteria when considering an agreement's certification:

- are the employees who are party to the agreement disadvantaged compared to the terms and conditions applying under their relevant award?
- if employees are disadvantaged, is such a reduction, in context of their terms and conditions considered as a whole, contrary to the public interest (the no disadvantage test)?
- dispute settling procedures must be included;
- unions involved in the agreement must, where practical, consult with members; and
- the operational period of the agreement must be specified.

The 1992 amendments, while devolving responsibility to the bargaining parties, continued to rely on awards (as the benchmark for the no disadvantage test) and union participation in the bargaining process. While the amendments limited the AIRC's scope to intervene, it continued to play an important role in deciding whether enterprise agreements put up for certification satisfied the statutory tests, including the no disadvantage test. Hence, like the 1988 arrangements, non-union enterprises were effectively excluded from the AIRC enterprise agreement process.

The number of enterprise agreements approved by the AIRC increased once the July 1992 amendments became effective (see appendix 3). Most parties to these

agreements chose the amended certified agreements route, rather than the AIRC's enterprise bargaining principle.

In October 1993, the AIRC replaced its enterprise bargaining principle with the enterprise awards principle. This new principle allowed parties to formalise enterprise agreements as consent awards. It also provided scope for the AIRC to facilitate the making of these agreements by arbitrating as a last resort.

The *Industrial Relations Reform Act 1993* came into force in March 1994. It introduced new objectives for the Act. These new objectives focus on:

> ... the facilitation of enterprise bargaining;
>
> the protection of wages and conditions of workers through awards and by ensuring that labour standards meet Australia's international obligations; and
>
> the provision of a framework of rights and responsibilities consistent with the move towards a more decentralised system (Brereton 1993, p.2780).

The amended legislation places the onus for resolution of disputes, over single-business certified agreements, directly on the affected parties. Consequently, the role of the AIRC, in relation to agreement making, has changed, placing a greater emphasis on conciliation while diminishing its role in arbitration. The legislation also stipulates that enterprise agreements should contain a procedure for renegotiation at the expiry of their term.

The Reform Act, also made provision for certified agreements in unionised workplaces. In order to accelerate the spread of enterprise bargaining to workplaces with little or no union coverage, the Act also introduced enterprise flexibility agreements. Enterprise flexibility agreements are available to constitutional corporations (that is, organisations covered by the corporations power in the Constitution) whose terms and conditions of employment are covered by a federal award. If the negotiating workplace has one or more employees who are members of an eligible union, the union must be informed and may become involved in the negotiations. However, if no employees at the negotiating workplace are members of a relevant union it '.. is not necessary for a union to be party to an enterprise flexibility agreement, but any union that is party to an award binding the employer in respect of work done at the enterprise is entitled to be heard upon the application for approval of the agreement (Naughton 1994, p. 158). While the union has a right to be heard by the AIRC it has no right to veto an enterprise agreement.

The Reform Act, like the earlier amendments, includes a no disadvantage test which allows the AIRC in certain circumstances to refuse to ratify an enterprise agreement. This test helps reinforce one of Act's new objectives (that is the protection of wages and conditions through awards). The Minister for Industrial Relations during the second reading speech on the Reform Bill observed:

> The no disadvantage test has been an important innovation. Applying as it does to the overall package of employee entitlements, it allows for a wide range of variations to award conditions.

> It also allows for agreed reductions if these are judged not to be against the public interest, for example, as part of a strategy for dealing with a short term business crisis and revival. However, as the government has consistently stressed, the [no disadvantage test] provision is intended to protect well established and accepted standards which apply across the community, standards such as maternity leave, hours of work, parental leave, minimum rates of pay, termination change and redundancy provisions and superannuation (Brereton 1993, p. 2781).

The full bench of the AIRC reiterated this intent in its October 1995 Tweed Valley Fruit Processors decision (AIRC 1995a). The AIRC noted that, while a reduction in a 'community standard' was not prohibited by the Act, *substantial weight* should be given to such a reduction when applying the no disadvantage test.

There are differing views on the appropriateness of the no disadvantage test, in the context of increasing flexibility at the workplace. Some would argue that the no disadvantage test constructs a minimum which allows for greater flexibility at the workplace, so long as management and, if applicable, unions have the willingness and foresight to utilise it. Others, have argued that the test only allows enterprise agreements to be add-ons to awards, with the underpinning award system maintaining certain inflexibilities. Only time will tell whether the flexibility expected to be achieved from recent reforms will be constrained by the application of the no disadvantage test.

A total of 5 000 agreements have been ratified by the AIRC since the introduction of the no disadvantage test in mid 1992. Of these ratified agreements, an unknown number were adjusted to conform with the test. For example, the NCI Plastics (NSW) Pty Ltd enterprise flexibility agreement was only approved after the provision to cash in sick leave was amended. During this period the AIRC rejected 4 agreements, on the grounds that they did not maintain a community standard employment condition. Some may argue that this small number of amended and rejected agreements suggests that the no-disadvantage test has not been a constraint. However, this view fails to acknowledge that the existence of the test may have modified behaviour and hence the nature of the agreements put forward for ratification.

Notwithstanding any constraints which may arise from the no disadvantage test's application, enterprise bargains ratified by the AIRC have included changes to the conditions set down in awards and, in some cases, reductions in award conditions (Long 1995). For example, in approving the Rockwell/Collins enterprise flexibility agreement the AIRC found that the agreement would result in a reduction in award entitlements and protections. However, when the AIRC considered the agreement as a whole the reductions were not deemed to be contrary to the public interest. Appendix 3 details some of the broad areas covered in the first 1 000 agreements ratified by the AIRC. These include: changes to the contract of employment for casual, part-time and contract labour and rationalisation of penalty rates.

The Reform Act also refocused the award system as a 'safety net' to underpin the enterprise bargaining system. Workers unable to negotiate wage rises through

enterprise agreements can receive safety net wage adjustments through the award system.[1] The legislation requires the AIRC to review awards every three years to delete obsolete provisions and to ensure that awards remain 'secure, consistent and relevant'. The Act also provided for minimum entitlements for workers who did not already have access to them through awards or legislation. These entitlements give effect to conventions of the International Labour Organisation and the United Nations which Australia has signed.[2] The Act also provides a framework of rights and responsibilities for the industrial parties and requires the removal of specified forms of discrimination from awards.

According to the president of the AIRC, the reforms, and particularly the features for addressing equity in the workplace, involve 'the most fundamental change to the industrial relations system in Australia since the *Conciliation and Arbitration Act 1904*' (O'Connor 1995, p. 63). There was not, however, universal acceptance of this view, particularly in regard to the Act's provision on employee rights on termination of employment (see for example ACCI 1995). This aspect of the legislation was subsequently amended.

After the Reform Act became effective there were three main avenues open to formalise an enterprise agreement in the federal system. These were certified agreements and enterprise flexibility agreements, as set down under the Act, and consent awards under the AIRC's principles. In August 1994, the AIRC indicated it would give priority to approving enterprise agreements as either a certified agreement or an enterprise flexibility agreement. However, the Commission recognised that, for some parties to an agreement, there may be a strong preference to formalise their agreements in an award. To accommodate this, the AIRC restructured its bargaining principle. The AIRC, as under its previous principle, requires enterprise bargaining award wage increases to be productivity based. However, it now applies other tests to reflect requirements under the Act's certified agreement provisions.

In October 1995 the AIRC handed down its decision on its review of the third award level safety net adjustment and the Reform Act's award review requirement. The AIRC emphasised the importance of safety net adjustments in the industrial relations award system. It indicated that this adjustment, like the earlier adjustments, would apply to federal awards, 'even where all relevant award employees are covered by an enterprise agreement' (AIRC 1995b). To avoid double counting, the adjustment would, however, be offset against any wage increases paid under bargaining

[1] The AIRC first provided for a safety net wage adjustment in its October 1993 decision. By October 1995 the AIRC had arbitrated three $8 per week safety net adjustments, so that all employees covered by a federal award receive a wage increase of at least $24 per week over the period from 1 November 1991 to 30 June 1996.

[2] These entitlements cover minimum wages, parental leave, equal remuneration for work of equal value without discrimination based on sex and certain rights in cases of termination of employment.

agreements ratified by the AIRC. Hence if the parties to a formal bargaining agreement had agreed to a pay rise less than the safety net adjustment, the pay rise would be topped up. The AIRC also made the payment of this third adjustment subject to the award parties complying with certain requirements. These included reporting on the outcome of discussions to review the award as required by the Reform Act.

In regard to the award review, the Commission indicated it would take a proactive approach, using its arbitral powers if there is no likelihood of conciliation. It indicated that awards once reviewed would remove identified deficiencies. They would also become: easier to understand; easier to adapt to the needs of the enterprise; and non-discriminatory in their operation. The vehicles for enhancing the relevance of awards to business include the insertion in awards of enterprise flexibility clauses, facilitative provisions and majority clauses.[3] The AIRC requires that all existing federal awards must be reviewed by 22 June 1997 (AIRC 1995b).

The Reform Act and the subsequent AIRC decisions have clearly extended the application of enterprise bargaining. As a result, the federal industrial relations system is much more decentralised in its focus. However, the system remains closely linked to the centralised award process, in terms of the safety net and the no disadvantage test provisions. For some non-unionised enterprises it can also result in a degree of union involvement in the negotiation and ratification process.

Appendix 3 examines Australia's experience with enterprise agreements to date. It finds that the number of enterprise agreements ratified by the AIRC has increased substantially since the AIRC's 1991 decision to endorse formal enterprise bargaining in the federal system. By early October 1995 over 5 800 agreements had been ratified by the AIRC.[4] As discussed in appendix 3 these agreements contain a range of productivity enhancing measures which could produce significant changes at many workplaces. However, data on the actual productivity gains achieved through enterprise agreements is relatively scant. There is, however, some firm level evidence to indicate that enterprise agreements may be contributing to increases in productivity. For example, a survey conducted by the Department of Industrial Relations indicated that managers in workplaces with enterprise agreements were more likely to report an increase in productivity than managers in workplaces without enterprise agreements (DIR 1995a). Appendix 3 also examines the number of employees covered and the sectoral distribution of agreements.

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[3] An enterprise flexibility clause allows individual workplaces to reach agreement to adapt award provisions to suit their needs. A facilitative provision is part of an award clause which enables agreement at the enterprise level to determine the manner in which the clause is applied by the enterprise. A majority clause is a means of increasing award flexibility, it provides that, where a minority of employees in an enterprise are covered by one award and the majority are covered by another award, the award covering the majority shall apply (see AIRC 1995b for further details).

[4] This represents the cumulative number of agreements, including replacement agreements, ratified by the AIRC.

5.2.4 Industrial relations reform: what of the future?

The federal industrial relations system has experienced a number of significant changes over the last decade. The system, once highly centralised and based on industry wide multi-employer awards, has progressively evolved. Enterprise agreements, underpinned by an award structure, are now the system's major focus. Discussing the new industrial relations system the Minister for Industrial Relations observed:

> The new industrial relations system provides the framework and with it comes unprecedented scope and incentive for firms to achieve increased flexibility and productivity. Now that the framework is there, it is up to the parties to use it to their mutual advantage, and for the economic benefit of Australia (Brereton 1994, p. 5141).

Reflecting divergent views and different judgements about the merits of particular arrangements, this assessment is not fully accepted by all bargaining parties and industrial relations commentators. For example, the Business Council of Australia (BCA) has supported the need for further labour market reform to make it:

> ... more responsive to the circumstances of individual enterprises and their employees. ... In principle, the Business Council believes the labour market should not be immune from competition. Indeed, in the view of the Business Council, where competition law has been applied to the labour market it has assisted the competitive process... (BCA 1994, p. 12).

Reflecting these considerations, in November 1994 peak employer bodies applied to the Commonwealth for significant changes to the existing industrial relations laws. Their proposals were for:

- awards to contain only 'core' minimum conditions, so that enterprise bargaining is more flexible;
- unions' role in negotiating wage deals to be reduced so that employees have the right to choose who represents them;
- strengthened powers for the AIRC to order an end to strikes; and
- a code of conduct to prevent unions acting as spoilers in non-union wage agreements (Norrington 1995).

The Industry Commission echoed these views, suggesting that the continued existence of multiple awards and the present structure of the safety net 'constrain the ability of workforces to adjust to change' (IC 1994, p. 11). The Commission has also noted that:

> ... prescriptive provisions, such as the 'no disadvantage test' should be interpreted broadly so that they do not unnecessarily constrain the implementation of enterprise bargaining agreements and restrict flexibility in the employment of labour (IC 1995c, p. vi).

The proposals referred to above run counter to the views espoused by the accord parties. For its part, the Commonwealth holds that minimum wages and standards of employment are necessary to ensure worker commitment to enterprise bargaining. It does not support a wholesale reduction in the content of awards, because:

> .. this would cause a substantial reduction in the effectiveness of the award framework. While the emphasis should increasingly be on enterprise bargaining, the maintenance of an effective and relevant award system is of vital importance. It acts as the safety net for the system - underpinning bargaining arrangements and providing adequate protection for those who are unable to reach workplace agreements (Commonwealth of Australia 1994b, p. 148).

Similar views have been expressed by the ACTU. In support of the current industrial relations system and, in particular the maintenance of the award system, the ACTU indicated that:

> Awards are what preserves most workers' minimum conditions of employment.... The alternative model for industrial relations... is either the immediate or eventual destruction of award protections. In their place will be a skeletal amount of minimum standards and individual contractual arrangements to fill the void - if you're lucky and your boss is generous (Pallas 1995, p. 31).

Some other commentators also agree that the maintenance of awards is critical. However, they query whether the current arrangements meet the needs of many groups who do not have the capacity to bargain on a workplace by workplace basis. For example, the National Pay Equity Coalition in its submission to the AIRC's 1995 review of wage fixing principles said:

> Enterprise bargaining is clearly not relevant to substantial numbers of workers, and award wages are decreasingly relevant to the cost of living.
>
> With enterprise bargaining the work undertaken by the AIRC and the parties to establish a framework for fair and equitable relationships on an industry and occupational basis through the structural efficiency principle and minimum rates adjustments is being undermined.
>
> If access to the award system continues to be constrained, while limited numbers (and even fewer of the industrially weaker groups) can achieve enterprise agreements, for many workers there is no industrial system at all, just whatever arrangements organisations choose to provide (NPEC 1995, p. 38).

In commenting on the nature of Australia's current industrial relations system, Sloan, at one extreme observed:

> The premises on which compulsory arbitration and enterprise bargaining are based are profoundly inconsistent... The former is about the power of state intervention to eliminate (or reduce) industrial action and the ability of single parties (mainly unions) to access the tribunals to order binding decisions on others. It is an administrative solution, not a market-based solution, although the scope for over-award bargaining has added an element of flexibility in the past. Enterprise bargaining, on the other hand, is based on the proposition that the parties to bargaining are best-placed to assess their interests and to engage in negotiations that can produce a balanced outcome based on these interests. To be sure, the parties may play 'hard-ball' and there is a case for some rules governing procedure — in relation to recognition and victimisation, for example. The case for a third party to judge the outcomes of negotiations is much weaker. The point is that compulsion and voluntarism are a very odd combination, particularly when the line between the two is unclear (Sloan 1995, p. 7).

In contrast, Short and Buchanan consider that by the end of 1994 Australia was continuing to develop:

> ...[a] novel approach to using industrial relations and wages policy as an instrument for promoting labour market reform that simultaneously encouraged efficiency and equity.... It appears that those involved in negotiating agreements are developing a unique approach to labour market reform that combines flexibility through agreements with co-ordination through awards. The emerging system of 'co-ordinated flexibility' may be more effective than one that primarily relies on arbitration, or one that is predominantly market based (Short and Buchanan 1995, p. 131).

Some of the disagreement about the merits of the current industrial relations system reflects the relative complexity of the arrangements. For example, Naughton points out that the enterprise bargaining provisions introduced via the Industrial Relations Reform Act are 'breathtakingly complex' covering something like 40 pages of the consolidated Act. This compares with less than four pages for the enterprise bargaining provisions in the previous, now repealed, legislation (Naughton 1994). Similarly, Stewart notes:

> ... the provisions regulating both EFAs [enterprise flexibility agreements] and certified agreements are extremely complex and contain many potential areas of uncertainty: for example, as to the definition of an 'enterprise', as to what constitutes 'disadvantage' to workers, and as to what level of consultation is required with the workforce. It is also unclear what attitude the Commission will take in those instances where it has a discretion to apply the public interest (Stewart 1994, p. 145).

Reflecting, in part, these considerations Stewart stated that:

> Despite the attractiveness of registering an agreement in order to oust the operation of an award whose provision may be regarded as insufficiently flexible where the needs of the enterprise are concerned, it would not surprise if many employers baulked at the cost and effort associated with the process (Stewart 1994, p. 145).

In relation to the employee protection and equity provisions in the current arrangements the Sex Discrimination Commissioner has submitted that:

> ... guidelines should be developed on the meaning and operation of the Industrial Relations Act provisions on discrimination, "no disadvantage", unfair exclusion from an agreement, and on the information and consultation requirements including the specific requirements regarding "relevant employees" (HR&EOC 1995, p. 2).

The National Pay and Equity Coalition also drew the AIRC's attention to the need for guidelines submitting that:

> ... the development of guidelines is necessary to assist parties reach agreements that comply with the Act, and thus provide the framework necessary to an increased spread of enterprise bargaining agreements, and the increased inclusion of equity initiatives within agreements (NPEC 1995, p. 20).

Complexity and uncertainty can increase the costs and reduce the flexibility associated with enterprise bargaining. That said, it is reasonable to expect initial adjustment costs with any new industrial relations system. These costs and constraints should diminish somewhat as managers, unions and workers become more experienced in negotiating

agreements and current uncertainties are progressively lessened by future AIRC decisions.

In commenting on the issue of relative complexity, the Department of Industrial Relations observed that the *Workplace Bargaining Survey* conducted in October and November 1994 found that none of the workplaces which had unsuccessfully attempted to negotiate an agreement in the 12 months prior the survey (covering 3 per cent of workplaces without an agreement) nominated the legislative arrangements as a cause. Further only about 3 per cent of private sector workplaces used a lawyer or consultant to help them in negotiating their agreements. The Department also drew attention to the spread of enterprise agreements, as evidenced by an 82 per cent increase in the number of agreements formalised in 1994-95 compared with 1993-94. Moreover, the incidence of agreements covering small business (with 20 or fewer employees) has almost doubled since the new legislative arrangements came into force in March 1994. In the light of these developments they submitted that there is no evidence that the legislation's alleged complexity has been a barrier to agreement making.

In summary, it is apparent that there are quite divergent views on the appropriate direction of future reform. Some of this reflects different assessments about the appropriate extent of government involvement in wages policy. There is also disagreement over the merits of a system which has a centralised component underpinning a decentralised bargaining component**.** In particular, there is disagreement over the appropriate role of unions, the extensiveness of the centralised framework overseeing the development of enterprise bargaining initiatives, and the appropriate form of safety net protection.

5.3 Some other workplace and labour market reforms

Education and training programs can have an important bearing on the ability of firms and enterprises to adjust to changes in market demands. For new entrants to the workforce, appropriate training qualifications provide a credible endorsement of their competencies, necessary to attract prospective employers. Even for the more experienced workers, structural change has heightened the relevance of training as a means of adjusting to new employment challenges. Often, workers and management must learn new ways of adding value to an enterprise and, inevitably, this requires some training. Such training may come either on-the-job or through external (institutional) sources. Government's recognising the importance of education and training have taken steps to improve Australia's human capital. Section 5.3.1 briefly outlines some of the reforms undertaken by the Commonwealth government in the area of workforce training.

The discussion of the labour market so far has focused on reforms affecting employers and their working relations with employees. However, the number of people without

jobs has remained stubbornly high. For example, in May 1994, in seasonally adjusted terms, there were 862 800 unemployed persons or 9.9 per cent of the workforce looking for full time or part time jobs. Approximately 310 800 of these people were considered as being long term unemployed (ABS 1995b). The main aim of the federal government's May 1994 *Working Nation* statement was to reduce this unacceptably high level of unemployment. Changes to labour market assistance programs introduced in *Working Nation* are briefly discussed in section 5.3.2.

5.3.1 Training reforms

The award restructuring process initiated a greater focus on vocational training as a means of achieving both worker and employer goals. The structural efficiency principle highlighted multi-skilling and the development of career paths as key elements of enterprise productivity improvement, linking pay increases to progress in the development of firm structures for skill enhancement.

Most industry training is informal, on-the-job training and therefore difficult to assess, both in quantum and content. Structured, off-the-job training has traditionally come through public institutions, namely universities and the technical and further education (TAFE) system. The state/territory governments which run the TAFEs have individually set training standards, approved curricula and accredited training programs and providers.

While recognising the value of regional diversification and tailoring training to local needs, governments found a balancing need for a national approach to setting priorities, curricula, competencies and allocating funds. Although constitutionally limited in its powers over training, the Commonwealth has acted as the catalyst for change to improve the quality, relevance and effectiveness of training. Since 1989, it has more than doubled federal expenditures on vocational education and training.

National training reform agenda

In 1990, the federal government set out its priorities for training reform in what became known as the national training reform agenda, which aimed to:

- substantially increase the level of national investment in training;
- improve the quality and flexibility of national training arrangements;
- improve the national consistency of training arrangements and the coordination of the national training effort;
- improve access for disadvantaged groups; and
- reform arrangements for the recognition of overseas qualifications (Dawkins 1989).

The implementation of a competency-based approach to training, the reform of entry-level training arrangements and the provision of structured training in the workplace

have been key elements of the training reforms. Competency-based training focuses on outcomes. Importance is placed on demonstrating what people can do in the workplace rather than the length of time spent in training or in formal education institutions. Competency standards are adopted as the benchmarks for the accreditation of training, delivery of training, the registration of providers and the recognition and certification of individuals.

The (federal and state) ministers for vocational education and training have overseen the agenda. They have cooperated to introduce a number of initiatives for developing a competitive training market and building a client focused culture in the vocational education and training system. Under the new system, the Australian National Training Authority (ANTA) took over responsibility in 1994 for national strategic planning and the allocation of funds to the states. The government intended the establishment of a network of industry training advisory bodies to ensure the relevance of the system to business needs.

Federal, state and territory governments jointly established the National Training Board in 1990. The board included representatives from industry, the ACTU and government. It has facilitated the development and endorsement of national competency standards developed by industry. The functions of this board have been transferred to a new Standards and Curriculum Council which operates under ANTA's framework.

A Senate Employment, Education and Training References Committee review of the ANTA commenced mid 1995. Submissions to this review have revealed concern with some elements of the training agenda (Dwyer 1995). For example, the BCA observed that 'ANTA needs to be given the necessary support to ensure that all state/territory bodies act in accordance with the common national agenda' (BCA 1995a). The review is expected to be completed by early 1996.

Training guarantee levy

Finding that half of Australia's employers made no expenditure on structured training, the federal government sought to introduce a training culture into business. On the recommendation of a report by the National Board of Employment, Education and Training (ESFC 1989) the government introduced a training guarantee levy. Firms which failed to spend a minimum 1.5 per cent of their payroll cost on training were subject to the levy.

This compulsory levy drew criticism, particularly from business (see, for example, Shann 1989). A study of training by Clare and Johnston (1993) concluded the levy was a blunt instrument for achieving the government's objectives.

The government in its policy statement of May 1994, *Working Nation: Policies and Programs*, suspended the levy for two years. This decision was in response to the

increased training undertaken by firms since 1990. The Prime Minister on announcing the decision noted:

> Now almost all eligible firms are complying with their obligation to train.... Firms throughout Australia are investing in training and are far more aware of and committed to training since the introduction of the Training Guarantee (Keating 1994a, p. 103)

The government has indicated that it will abolish the levy altogether 'if there is a credible commitment to the creation of these [expected] new training places by business' (Keating 1994a, p. 103).

Working Nation training initiatives

The Commonwealth Government announced a number of important training initiatives in *Working Nation* which aim to make Australia's training system more flexible and responsive to the requirements of both industry and individuals. The changes reflect a recognition that 'education and training should be a life long process' and that 'skill development is central to improving productivity and contribution to the performance and viability of industry' (Keating 1994a, p. 98).

Reforming Australia's vocational, educational and training system was an important element of the Working Nation program of reform. Initiatives in this area included:

- expanding the number of entry-level training places available;
- the Australian Student Traineeship Foundation which is designed to forge stronger links between schools and industry by allowing students to combine school based studies with work experience and off-the-job training; and
- funding to improve curriculum quality and further assist in the professional development of teachers and trainers.

Another training initiative was the introduction of a national training wage. Prior to its introduction many employers where constrained in their options to employ workers under a traineeship. This was, in part, because training and wages needed to be negotiated on an award by award basis. The new training wage, unlike the training or apprentice wages prescribed under specific industry or occupation awards may apply to adults. Employees taken on under the training wage arrangements undergo a formally recognised training period. At the completion of this period the relevant award wage applicable to other workers in the industry or occupation applies. In September 1994, the AIRC approved the national training wage interim award. The terms and conditions of this award have been progressively introduced into all state and territory industrial jurisdictions. As a consequence awards covering approximately 60 per cent of Australia's workforce include provision for the national training wage. The government provides incentive payments to employers who take on new trainees under the National Training Wage Award. The level of subsidy depends on factors such as the level of training offered and the degree of disadvantage a potential trainee faces in the labour market. For example, higher subsidies are available for the long

term unemployed. By the end of June 1995 just under 8 000 trainees had commenced under the program (DEET 1995).

The new National Employment and Training Taskforce (NETTFORCE) aims to build employer commitment to provide employment and training places, particularly for young people and the unemployed. NETTFORCE also aims to streamline administrative processes and promote *Working Nation* initiatives. NETTFORCE has established 25 industry training companies to help achieve these goals. In 1994-95, $6.7 million was expended on the program (DEET 1995).

Working Nation also announced a Youth Training Initiative. The initiative provides intensive case management and offers opportunities for training, education and job placement for unemployed people under the age of 18 years. The initiative also includes a new income support arrangement designed to encourage young people to participate in education and training.

5.3.2 Labour market assistance programs

The *Working Nation* statement also introduced wide-ranging changes to the social security system as well as its relationship with the taxation system. An extensive suite of labour market programs complemented these initiatives. The overall thrust of the government's approach is to move from spending on income support to more active programs to return unemployed people, particularly long term unemployed, to work.

The Job Compact represents the government's strategy for dealing with this problem. For people who have been on unemployment allowances for more than 18 months, it guarantees a job placement of 6 to 12 months (primarily in the private sector). This gives them training and some work experience to keep them in touch with workforce and skill requirements. In turn, the government has placed a 'reciprocal obligation' on the unemployed to actively pursue work or training. Greater penalties now apply for failure to accept job offers, attend interviews or training courses.

In the year to the end of March 1995, 184 500 Job Compact clients achieved an outcome which ceased their Commonwealth Employment Service (CES) registration and unemployment benefits. Around 60 per cent of these found employment (Crean 1995a). While it is too early to fully judge the effects of the *Working Nation* initiatives, the trend in unemployment since the statement has been encouraging. In seasonally adjusted terms, the unemployment rate fell from 9.5 per cent in July 1994 to 8.3 per cent of the labour force in August 1995. Notwithstanding an increase in the unemployment rate to 8.5 per cent in September 1995, the proportion of long term unemployed in the unemployed labour pool declined from 35.6 per cent in July 1994 to 31.1 per cent in September 1995 (ABS 1995b).

In addition, the government adopted a case-mix approach to helping find jobs for those most at risk of becoming long term unemployed. The government also moved to

develop a market for the provision of services to the unemployed, a function previously dominated by the CES. This initiative allows community groups, private organisations and representatives of state and local governments to add depth to the market for case management. The government has contracted over 270 community and private case management providers since the initiative was introduced (Crean 1995a). Working Nation also strengthened the CES capability with additional human and capital resources.

Working Nation has led to the restructuring of the interaction of taxation and social security provisions in dealing with low levels of income. This was in response to the 'poverty trap' which can arise because:

> ... wage levels in low skilled occupations are now quite low relative to Social Security payments to unemployed families. As a result, in some cases people are disadvantaged if they take a full time job (Keating 1994a, p. 13).

To reduce this perverse incentive, the government lowered the withdrawal rate for social security benefits from a full dollar to 70 cents for each additional dollar earned. *Working Nation* also extended the income range over which these revised rates operate. The Prime Minister expected this to 'provide an additional incentive for the unemployed to take part time jobs to supplement their income where they cannot find full time employment' (Keating 1994a, p. 14).

5.4 Managing for a new workplace culture

Australia's history of industry protection, in the past, allowed many Australian firms with weaknesses in industrial organisation to operate without meeting the standards of their more efficient rivals overseas. When barriers to imports fell, international competition intensified and exposed a myriad of shortcomings in such firms. These included inefficient work practices and industrial processes and poor quality control. In 1990, a major report on Australian manufacturing noted:

> one of the clearest legacies of our protectionist past is the lack of an internationally competitive culture within the Australian workplace (AMC/PCEK 1990, p. 59).

The report found Australia performed poorly against the world's best. It urged the development of a 'new workplace culture' emphasising international best practice. In a later report, the AMC defined best practice as:

> the co-operative way in which firms and their employees undertake business activities in all key processes: leadership, planning, customers, suppliers, community relations, production and supply of products and services, and the use of benchmarking. These practices, when effectively linked together, can be expected to lead to sustainable world-class outcomes in quality and customer service, flexibility, timeliness, innovation, cost and competitiveness (AMC 1994, p. 1).

5.4.1 Best practice and Australian firms

In the Prime Minister's *Building a Competitive Australia* statement of March 1991, the federal government introduced the Australian Best Practice Demonstration Program as part of its microeconomic reform agenda.

The Best Practice Demonstration Program aims to speed up the introduction and spread of new ways of working, based on international best practice. The program, by way of grants to participating firms, funds projects aimed at aspects of workplace best practice. Characteristics of best practice identified by the program include: a shared vision; flatter organisational structures; cooperative and participative industrial relations; a culture focusing on suppliers and customers; innovation in technology benchmarking; environmental management; innovative human resource systems; continuous improvement and learning; and networking. The government support is on the grounds that firms within the program provide a 'demonstration effect' and raise awareness of best practice methods.

Assessing the program for its desired 'demonstration effect', an interim evaluation found it had been effective in raising awareness of best practice in other, unfunded enterprises. Project recipients found that most enterprises had achieved or expected benefits from the program. Companies reported improvements in their workforce skill levels and flexibility, industrial relations and partnerships with suppliers and customers. For example, almost 30 per cent of participants reported productivity improvements had flowed from the best practice project; a further 40 per cent expected productivity gains to happen in the short term (DIR 1993a). A subsequent evaluation of the program's demonstration component found awareness of the best practice program in 1994 was higher than awareness one year earlier. And over 50 per cent of enterprises which had adopted business improvement initiatives reported improvements in key performance measures (Elliot 1995).

A study by the Australian Manufacturing Council found there is a clear link between best practice and business performance in Australia and New Zealand:

> Leaders in the adoption of best practice ... enjoy superior export growth and positive cash flows. These business performance outcomes are separate from the operational outcomes of cost, quality, flexibility, timeliness, innovation and competitiveness that are an intrinsic part of the [best manufacturing practice] model (AMC 1994, p. 9).

The AMC report found Australia's leader[5] firms were almost level with the world's best. However, a wide gap separated these leaders from the average and lagger firms surveyed. Australian (and New Zealand) manufacturers had come a long way in a short time, the study found. However, it also reported:

[5] The AMC defined 'leaders' as the top scoring 20 per cent of surveyed firms in each country against indices of strategy and practice. By contrast, 'laggers' are the lowest scoring 20 per cent.

> A disturbing finding of the study [was] that 35 per cent of Australian [manufacturing] firms ... have not yet embarked on any change program aimed at achieving best practice. These manufacturers, which tend to be small/medium and independent sites, are less likely to benchmark or export (AMC 1994, p. 19).

A more recent survey of best practice, covering the manufacturing, mining and services sector[6], also found low best practice adoption rates. Around 20 per cent of responding firms had commenced a formal best practice program. Large firms were more likely to have adopted a best practice program than medium and small firms (Elliot 1995).

Best practice is a moving target, since competitors overseas are continuously working to improve their performance. The AMC (1994) recommended that if Australian firms, even leaders, are to attain world best standards they must increase their emphasis on people practices and leadership.

5.4.2 A new paradigm for management?

Perhaps the most important determinant of the culture in an enterprise is its management. Managers affect the implementation of workplace change and the quality of bargaining outcomes. The OECD has suggested that, in the past, Australian business:

> ....may not have attracted the best talent. Indeed, a world-class management culture may have been slow to develop in Australia, due to the slow opening-up of the economy to world competition (OECD 1994, p. 66).

A recent report commissioned by the Commonwealth Government found Australia's leadership and management skills lacking in many significant respects (Karpin 1995). The Karpin taskforce considered that:

> it is critical for managers to be trained to operate in the new workplace culture, where negotiation and agreed productivity improvements are key workplace measures. The complacency engendered by protectionism and outdated and non-productive attitudes encouraged by years of adversarial industrial relations needs to be replaced by more effective people and workplace oriented approaches (Karpin 1995, p. 98).

Despite the various reforms of Australia's employee relations, Australian managers overall have not adequately responded to the new business environment. Although ranking well on some criteria, Australia's managers were relatively weak in attributes such as leadership, entrepreneurial skills, adaptability and long term vision (Karpin 1995).

The Karpin taskforce advanced a 'new paradigm of management' emphasising flexibility, open communication, strategic and organisational learning and

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6 The survey's coverage did not extend to accommodation cafes and restaurants, Government administration and defence or Personal and other services industries.

empowering the workforce. Managers need to adopt this paradigm in order to succeed in the new business environment brought about by increasing globalisation, widespread technological innovation and pressure on business to customise products and services (Karpin 1995).The taskforce foresaw some important new challenges for Australia's managers and made numerous recommendations to meet these challenges. These recommendations focused on changing management culture through education, demonstration and accreditation.

The government responded to the taskforce recommendations by:

- introducing a national training strategy for frontline managers (developed with the Australian National Training Authority). The strategy will commence in 1996;
- developing agreed strategies between education and industry departments in the state, territory and federal governments to progress enterprise education in schools and develop enterprise awareness in the community; and
- providing $1 million in seed funding for the development of course materials to suit the needs of small business managers for delivery through an open learning approach (Crean 1995b).

The government rejected the task force recommendation of a move towards full fees for all post graduate courses as inconsistent with the government policy principles of equity and access. It has indicated it will develop a more comprehensive response to the challenges raised by the task force report after feedback from relevant stakeholders. In this context, the BCA has cautioned against excessive government involvement through, for example, the task force's recommended new Australian Council for Management Development. Although recognising the need for increased and more effective management training, the BCA considers that 'business is accountable for getting its management house in order: there is no excuse for it to hand the baton over to any committee' (BCA 1995b).

Drawing on the Karpin report, the government, as part of its recent *Innovation Statement*, announced it would fund a range of initiatives to help develop best practice managers. These initiatives include a mentoring scheme and a range of education and advisory activities to upgrade management skills

5.5 Concluding comments

Australia's industrial relations and vocational training systems have changed considerably over the last decade or so. A variety of factors have driven these changes, including the challenges created by other microeconomic reforms directed at internationalising the Australian economy.

The centralised industrial relations system is progressively giving way to a more decentralised system focused on workplace bargaining. Firms — managers and

workers — now have greater autonomy in organising, training and rewarding their efforts at the enterprise level than they had a decade ago. Although information on productivity improvements actually achieved from the industrial relations reform process is relatively scant, there is some firm-level evidence to indicate that enterprise agreements are contributing to increases in productivity.

Nevertheless, critics of the current system remain vocal. Some groups have raised concerns that the more decentralised system will undermine the equity principles established under the previous more centralised system. Others have expressed concerns in relation to the mix of compulsion and voluntarism evident in the current arrangements. There is disagreement over the appropriate role of unions, the influence of the centralised framework in the development and approval of enterprise bargaining initiatives, and the appropriate form of safety net protection.

That said, the changes made to the industrial relations system, in conjunction with the reforms to labour assistance programs and reforms to workplace education and training, should encourage greater flexibility in the labour market and the workplace. Despite these changes, there remains a significant proportion of firms that have not yet embarked on a change program which could bring them to the level of international best practice. The ability of management and the workforce to do so will be critical to Australia's international competitiveness.

6 Structural change — a broad overview

Structural change is a term used to refer to the larger and more lasting changes occurring in the structure of an economy. It is reflected in changes in the relative size and characteristics of industries and sectors. Such changes may encompass an industry's share of output, value added (or gross domestic product) and employment. Australia's structural change has, in the main, tended to follow the pattern evident in other developed countries (see BIE 1995f). Structural change is an inevitable process and reflects the influence of a wide range of market and government related factors. Government policies, such as trade liberalisation and other microeconomic reforms, also influence the extent and pace of structural change. According to EPAC, prior to the mid 1980s, Australia's insulation from international markets retarded structural changes in the economy:

> Australia's economic structure until recently has been relatively sclerotic for a significant part of the post war period...The slow pace of structural change may reflect the existence of domestic impediments to the flow of resources between sectors of the economy, and the lack of adequate exposure through world markets to competitive pressures to improve our productivity and economic growth (EPAC 1993, p. v).

As outlined in chapter 2, since the mid 1980s the Australian government has pursued policies designed to integrate Australia into the world economy. As these policy changes influence the incentives environment faced by firms and industries an acceleration in structural change could be expected. This chapter briefly examines the extent of structural changes since the early 1970s in terms of:

- changes in the composition of Australia's output and employment (section 6.1);
- a structural change index (section 6.2);
- the internationalisation of the economy (section 6.3); and
- the different influences affecting the rate of change in the economy (section 6.4).

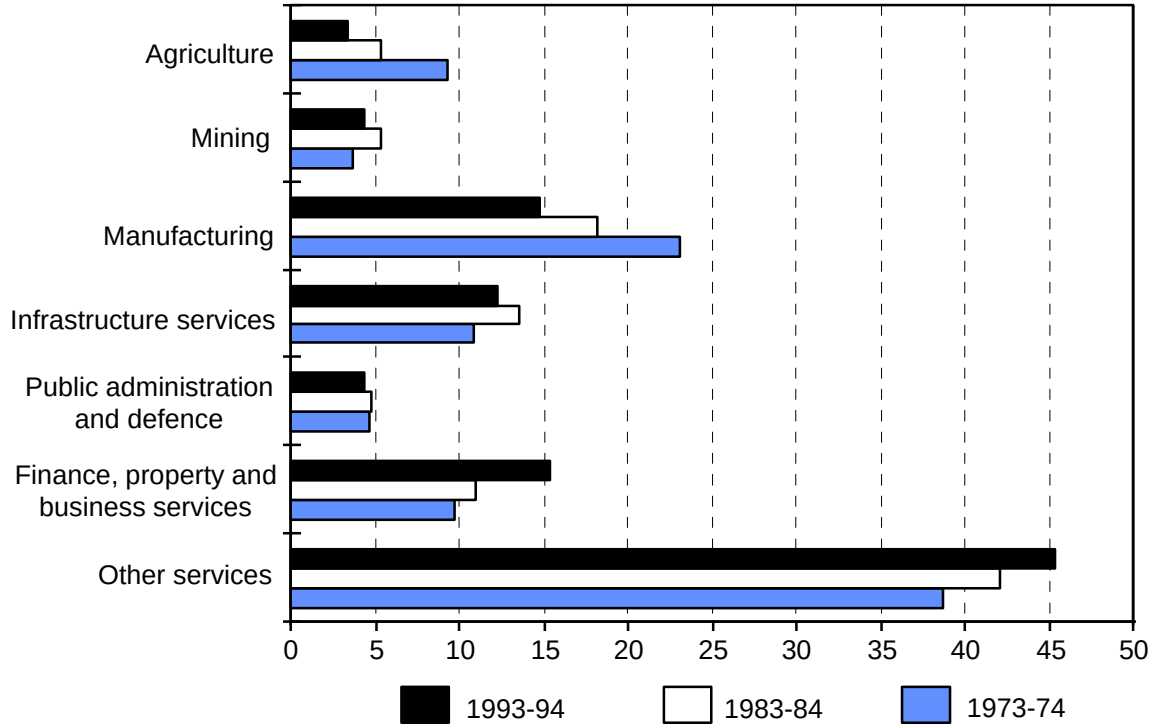
A concluding comment is presented in section 6.5.

6.1 Changes in the composition of Australia's output and employment

Over the last two decades, there has been considerable change in the composition of Australia's output. Service industries, including infrastructure industries and finance, property and business services, have become increasingly important in the Australian economy. This change is in line with the experiences of other developed countries.

The output share of mining has also increased, while agriculture and manufacturing have become relatively less important in the economy (figure 6.1).

Figure 6.1 Share of national output by broad sector and industry group, (selected years)



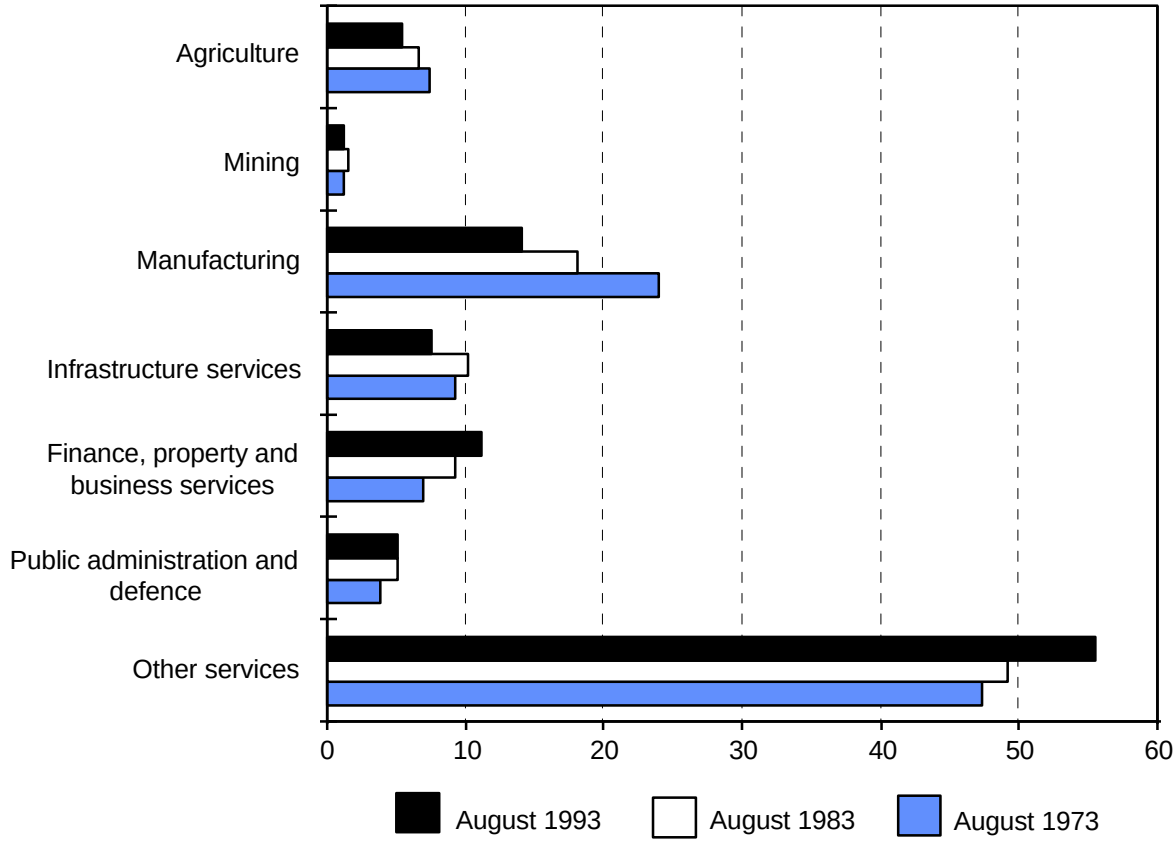
Note: National output is measured in terms of gross domestic product at factor cost.
Source: ABS (1995d).

Over the last two decades, the composition of employment by industry has also changed considerably. While total employment increased by about 32 per cent over the period 1973 to 1993, employment declined in some industry groups, including agriculture, manufacturing and some of the infrastructure industries. Agriculture's share of total employment declined from around 7 to 5 per cent, while manufacturing's share fell from 24 to 14 per cent (figure 6.2). Infrastructure's share of total employment also declined from around 9 to 7.5 per cent. In contrast, other services industry's share of total employment increased from 47 to 56 per cent. Finance, property and business services' share of total employment also increased from around 7 to 11 per cent.

These changes in the composition of output and employment provide an indication of the restructuring underway in the economy. These changes cannot be solely attributed to the microeconomic reform process. Nevertheless, the process has contributed to these changes. For example, government owned infrastructure service industries have experienced substantial numbers of redundancies in response to the program of infrastructure reforms. Some firms in the manufacturing sector have also experienced

redundancies, plant closures and even closures in response to phased reductions in assistance. However, any negative effects are likely to have been more pronounced in the industries experiencing substantial reductions in assistance. Indeed, the number of persons employed in the highly assisted industries, such as textiles, clothing and footwear and transport equipment, has fallen substantially over the last decade.

Figure 6.2 Sector and broad industry shares of total employment, (selected years)



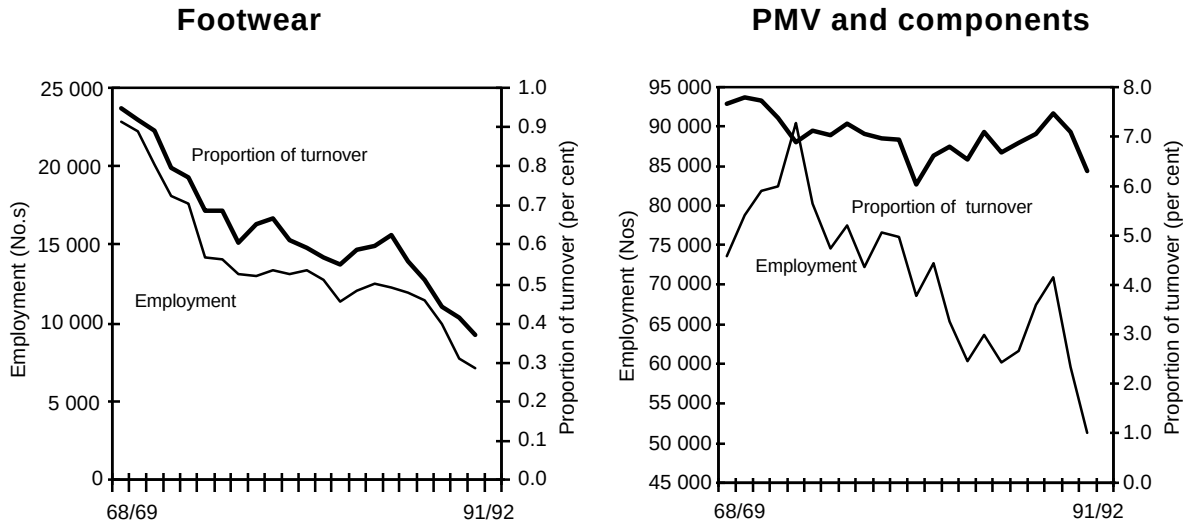
Source: ABS (1995f).

While we should not discount the costs of the reform process, it is also important to consider 'what might have occurred if the economy had not experienced the reform program?'. Answering such a hypothetical question is not easy. However, we do know that Australia has not embarked on this program of reform in isolation. For example, Henderson (1995) has recently drawn attention to the programs of reform underway in a number of our competing economies. In the absence of reform, it is likely that Australia would have experienced substantial structural change — and its associated costs — if our national competitiveness, relative to other economies, declined as our competitors pushed forward their reform agendas.

One thing we do know is that the decline in employment experienced by Australia's more highly assisted industries is not a recent phenomenon. Despite the high barriers

to trade afforded in the past, numbers employed by these industries have trended downwards over the last two decades. In some instances, the downward trend has also been mirrored in the industries' contribution to sectoral employment and share of manufacturing turnover — the footwear industry falls into this category (figure 6.3).

Figure 6.3 Employment and share of total manufacturing turnover: Footwear, and PMV and components industries



Source: IC (1995d).

In other instances, the absolute decline in employment has not been matched by a decline in the industry's relative importance to the manufacturing sector — PMV assemblers and component producers fall into this category (see figure 6.3).

6.2 Measuring the extent of structural change

A structural change index (SCI) can indicate the extent of change experienced by the various sectors of the Australian economy (see box 6.1 for a description of the index). We have constructed such an index for the period 1973-74 to 1993-94 based on each broad industry groups share of GDP. Looking at the entire period, 1973-74 to 1993-94, the manufacturing sector stands out as experiencing the largest degree of structural change. Manufacturing had the highest SCI for GDP and employment (table 6.1). Other industry groups with relatively high indexes (greater degrees of structural change) are agriculture; finance, property and business services; and other services.

On the basis of the SCIs for GDP presented in table 6.1, the agriculture and manufacturing sectors and the infrastructure services industry group experienced more structural change during the 1973-74 to 1983-84 period than in the latter period. The SCI for employment tells a similar story for manufacturing, but suggests agriculture

and infrastructure services experienced more employment change in the period 1983-84 to 1993-94. On the basis of the GDP SCIs, the finance, property and business services industry group experienced greater change during the 1983-84 to 1993-94 period. The degree of structural change for other services industry group, as measured by the SCIs for GDP, was similar over both periods. The other services industry group, however, experienced substantially greater structural change, as measured by the employment SCIs, in the 1983-84 to 1993-94 period.

Box 6.1 Measuring structural change

A standard technique for measuring the rate of structural change is to construct structural change indexes (SCIs) for each sector and/or industry group of the economy over a uniform time period. The SCI is calculated by taking half the sum of the absolute value of the change in each sector's or industry's share of, for example, GDP, turnover or employment. The SCI is bounded between zero and 100, with zero representing no structural change and 100 indicating a complete reversal of structure. For example, significant movements in the share of GDP of a particular sector (either up or down) would result in a large number for the index. On the other hand, a sector that has maintained its share of GDP or where only minor changes have occurred would have a small index number.

Table 6.1 Structural change in Australia, 1973-74 to 1993-94

Sector and industry groups	*Structural change index*					
	1973-74 to 1993-94		*1973-74 to 1983-84*		*1983-84 to 1993-94*	
	GDP	*Employment*	*GDP*	*Employment*	*GDP*	*Employment*
Agriculture	2.96	1.03	2.02	0.40	0.94	0.63
Mining	0.32	0.01	0.80	0.16	0.48	0.16
Manufacturing	4.18	4.90	2.51	2.88	1.67	2.02
Infrastructure services	0.73	0.88	1.37	0.49	0.64	1.37
Public administration and defence	0.08	0.61	0.07	0.57	0.15	0.04
Finance, property and business services	2.80	2.15	0.61	1.15	2.20	1.00
Other services	3.36	4.12	1.68	0.97	1.69	3.15

Source: BIE estimates.

The SCI estimates suggest that structural change for the manufacturing sector was more significant, in terms of changes in GDP and employment, during the 1973-74 to 1983-84 period than in the 1983-84 to 1993-94 period. This finding tends to be at odds with the widely held view that structural change and the internationalisation of the Australian economy gathered pace during the 1980s. Pressures for structural change have generally been thought to be closely associated with the phasing of tariff reductions for manufacturing industry and the deregulation of financial markets.

The level of aggregation of the data used to construct a SCI can sometimes mask the rate of change that has actually occurred (see BIE 1995f). Indexes calculated on the basis of more disaggregated manufacturing data indicate that substantial structural change occurred during the 1980's and early 1990s, particularly in terms of employment (see box 6.2). Unfortunately, detailed disaggregated data are not readily available for most sectors other than manufacturing.

Box 6.2 Manufacturing sector change at a more disaggregated level

SCIs are calculated using disaggregated manufacturing data based on 142 industry categories. The years chosen for this analysis differ from those chosen for the economy-wide analysis presented in table 6.1. This is because data for 1993-94 is not available at the level of disaggregation presented here. Similarly, turnover and sales data have been used rather than value added because of data availability.

	Structural change index for share of manufacturing sector		
	Turnover	*Sales*	*Employment*
1971-72 to 1991-92	16.07	15.73	17.44
1971-72 to 1981-82	9.81	9.74	8.62
1981-82 to 1991-92	10.30	10.57	12.34
1981-82 to 1986-87	6.69	6.69	6.97
1986-87 to 1991-92	6.33	6.38	7.20

The indexes for turnover and sales suggest that structural change was relatively even during the periods 1971-72 to 1981-82 and 1981-82 to 1991-92, but slightly greater in the latter period. The SCI for employment suggests that substantially greater structural change occurred during the 1981-82 to 1991-92 period with an index number of just over 12 compared with 9 during 1971-72 to 1981-82. These data would appear to support the view that structural change (at least in the manufacturing sector) has gained momentum during the 1980s. When the 1981-82 to 1991-92 period is divided into two sub-time periods (1981-82 to 1986-87 and 1986-87 to 1991-92) the indexes for turnover, sales and employment are substantially the same indicating that structural change has been occurring at a reasonably even rate during the 1980s.

While the SCI for manufacturing gives an indication of when change has occurred, this change can be the result of some industries share's of manufacturing turnover, sales and employment declining at the same time as others industries share's are expanding. A closer examination of the manufacturing industry data used to calculate the SCI shows that industry groups such as: motor vehicles and components; other transport equipment; textiles, clothing and footwear; appliances and electrical equipment; industrial machinery and equipment; and other fabricated metal products have experienced a decline in their share of manufacturing turnover, sales and employment. Conversely, industries including: beverages and malt; printing and allied industries; other chemicals; basic non-ferrous metals; and plastics and related products have all increased their shares.

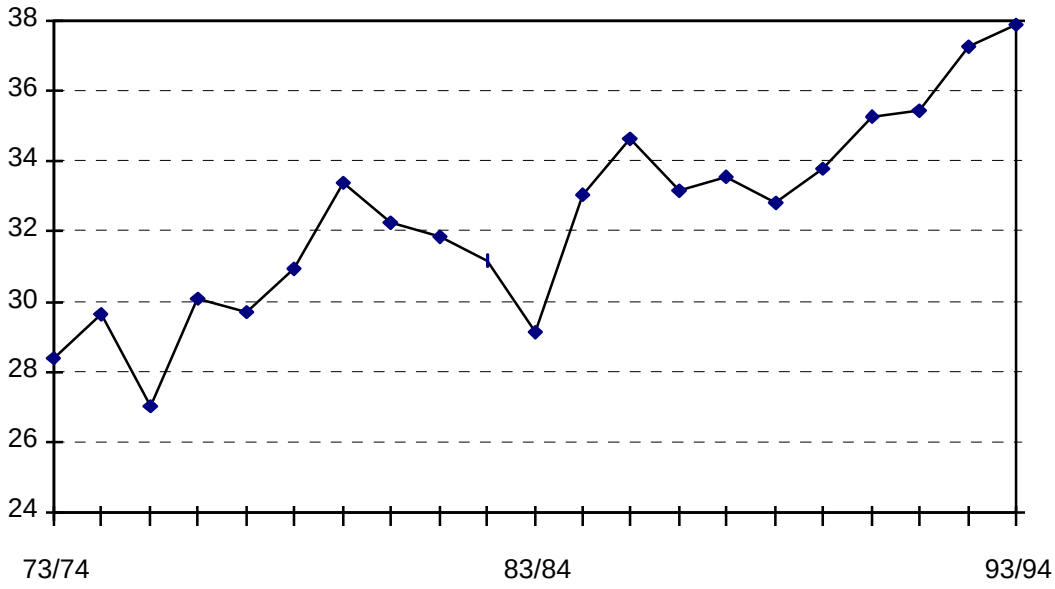
6.3 Increased internationalisation of the economy

Increased internationalisation — the extent to which Australian firms are developing global outlooks and strategies, and are sourcing out of, or selling into various overseas locations — is seen by many commentators as a key driver of much of the structural change (see for example, Ergas and Wright 1994). As many of Australia's microeconomic reforms have been designed to obtain gains (static and dynamic) from internationalising the economy, it is also a partial indicator of their success or otherwise.

The ratio of gross trade (goods and services exports plus imports) to GDP provides a useful summary measure of trade intensity for the Australian economy. This ratio is also used as a measure of openness to international trade. Australia's trade intensity has increased significantly over the past two decades. In 1973-74, the volume of trade was equivalent to about 28 per cent of GDP. This increased to about 30 per cent in 1983-84 and around 38 per cent in 1993-94 (figure 6.4).

The increase in Australia's trade intensity was achieved by strong growth in both the volume of exports and imports. In 1973-74 imports accounted for 14.2 per cent of GDP, rising to 19.1 per cent in 1993-94. Similarly, exports (goods and services) as a proportion of GDP increased from 14.2 per cent in 1973-74 to 18.8 per cent in 1993-94.

Figure 6.4 Australia's trade intensity, 1973-74 to 1993-94



Sources: ABS (1995a) and Econdata.

Despite this increased exposure to the international economy, Australia's trade intensity is lower than most industrial economies. A study examining the trade

intensity of 56 countries found the gap between Australian and average OECD trade intensity remains large 'being equivalent to almost 30 per cent of 1990 GDP' (Ergas and Wright 1994, p. 56). The authors found, however, that while Australia's trade intensity increased in recent years, the trade intensity of the OECD (as a whole) and a large group of other countries appeared to have plateaued (Ergas and Wright 1994).

There are a number of factors which influence a country's trade intensity. These include its overall size (as measured by GDP, for example), its location relative to potential markets and natural and artificial barriers to trade. As documented in chapter 3, Australia has experienced substantial reductions in its artificial barriers to imports. In addition, countries in close proximity to Australia are becoming increasing industrialised. In the process they offer new market opportunities for our exports as well as greater competition for import competing industries. Australia's trade composition reflects this, with a substantial proportion of trade moving our from the more traditional markets in Europe and North America to countries in the region (see BIE 1994e). This trend could accelerate with the introduction of APEC free trade initiatives.

While there has been a significant increase in Australia's trade intensity over the last 20 years, its trade potential is hindered by the relatively high transport costs associated with being an island continent some distance from major world markets. According to estimates by Ergas and Wright (1994), this geographic isolation from centers of world production now accounts for a sizeable proportion of Australia's low trade intensity, relative to the OECD average. Allowing for this geographic isolation, Australia's trade intensity in 1990, at least, was not exceptionally different to other industrial countries.

6.4 Isolating the factors contributing to structural change

Isolating the factors contributing to a long-term phenomenon like structural change is difficult. The background 'noise' of cyclical fluctuations in the economy complicates the analysis. A recent study by EPAC (1993) has endeavoured to identify the major factors influencing structural change over a five year period, 1986-87 to 1990-91. While this period is relatively short, the findings illustrate the diverse influences which can lead to structural change.

EPAC concludes that a wide range of factors contributed to structural change in Australia over the five year period. However, change was largely driven by developments in world trading conditions which improved Australia's terms of trade and had a positive effect on output. (There has been a slight deterioration in Australia's terms of trade since this time, see chapter 3). However, this positive output effect was offset by a reduction in the economy's overall level of productivity. EPAC concludes that the overall fall in productivity levels was largely a reflection of the

recession, which began in 1990, and the over-investment in property, which occurred in the mid to late 1980s. EPAC did, however, find strong growth in productivity in some sectors, such as electricity and communications, which were subject to significant microeconomic reforms.

Tariff reductions, according to EPAC, contributed positively, albeit to a small extent, to income growth over the period. EPAC found that no industry was particularly adversely affected by assistance reductions, and the effects of other sources of structural change were much more significant. The results indicated that tariff reform contributed in only a very minor way to employment losses in the short term. These results, however, do not capture the full extent of the reductions in tariff assistance (tariff reductions announced in March 1991 are not included in the period).

6.5 Concluding comments

Over the last two decades Australia has experienced considerable structural change in terms of the composition of both output and employment. Over the period, service industries have become increasingly important in the economy, while agriculture and manufacturing have become relatively less important.

A structural change index, at the broad industry group level, indicates some sectoral differences in the degree of change experienced over the last two decades. For agriculture and manufacturing more structural change, measured in terms of GDP, occurred between 1973-74 to 1983-84, than between 1983-84 to 1993-94. On the other hand, more change appears to have occurred during 1983-84 to 1993-94 for public administration and defence, finance, property and business services industry groups.

Using more disaggregated data, we found that substantial structural change occurred in the manufacturing sector during the 1980s and early 1990s. This finding is more consistent with the widely held view that structural change and internationalisation of the Australian economy gathered pace in the 1980s.

Australia's trade intensity has also increased significantly over the last two decades. The volume of trade as a proportion of GDP increased from about 28 per cent in 1973-74 to around 38 per cent in 1993-94. While the trade intensity of the Australian economy remains well below that of many other industrial economies the gap has diminished in recent years. Much of the remaining gap appears to reflect Australia's relative isolation from centres of world production.

Structural change reflects the influence of a wide range of both market and government related factors. Isolating the influence of microeconomic reform on structural change is therefore difficult, and complicated by factors such as cyclical fluctuations in the economy. Using a general equilibrium model, a recent EPAC study attempted to identify the major factors influencing structural change over the five year

period 1986-87 to 1990-91. It found that tariff reductions had only a relatively small impact on structural change. These results, however, do not capture the full extent of the tariff program or many of the infrastructure reforms. (In the period covered by the study, the tariff reductions announced in March 1991 had not commenced and many reforms to infrastructure had only just begun.)

A number of other studies, using both general equilibrium analysis and partial (industry) studies have attempted to measure the impact of microeconomic reform on the economy and on individual firms and industries. These models attempt to isolate the impact of microeconomic reform from other sources of on-going structural change in the economy (such as changes in international markets and technology). Chapter 7 looks at the findings of a number of general equilibrium models on the effects of microeconomic reform on the economy and sectors within the economy. The chapter also explores how microeconomic reform (in terms of reductions in assistance, prices and productivity) might impact on individual industries and firms.

7 Microeconomic reform: some potential impacts

Studies quantifying the potential benefits of microeconomic reform at the economy-wide level have played an important part in the evolution and ultimate acceptance of the microeconomic reform process in Australia. Such analysis has proven useful in helping to identify the potential magnitude of the benefits and main processes by which these benefits emerge over time. Nevertheless, many view the models and the methodologies used as black boxes. Often the mechanisms and assumptions used to derive the results are highly stylised. Beyond this, these studies provide little information about the adjustment process and the differential impacts of reform.

By their very nature, general equilibrium models cannot provide clear-cut indications of the impact of microeconomic reform at the detailed industry and firm level. The primary purpose of the BIE's *Monitoring Micro Reform* project is to help fill this information gap. The study aims to provide pointers to the main drivers of the impacts of recent reforms on different industries and firms within them. The project is also likely to highlight important inter-relationships between reforms as well as areas where further reforms could complement existing ones.

This chapter examines how microeconomic reform might impact on individual industries and firms, drawing on insights provided by general equilibrium as well as partial studies of the reform process. Section 7.1 provides a backdrop to the discussion. It briefly examines the findings of a number of general equilibrium studies which identify various sectors and industries which may gain (or lose) from the microeconomic reform process. Some limitations of these studies are also highlighted. Section 7.2 draws on a conceptual framework and illustrative examples to explore how microeconomic reform might 'bite' at the industry/firm level. The section also discusses the importance of competition and prices in the reform process. It considers the response options available to individual firms and the impact on the economy of improved productivity. Section 7.3 presents some concluding comments.

7.1 General equilibrium analysis

A general equilibrium model treats the economy as a system of inter-related industries. These models attempt to capture the interdependencies that arise between industries from the purchase of each other's outputs in the process of producing final products for sale on the domestic and export markets. They also try to capture the industry linkages that arise from competition for available resources, including labour and capital.

General equilibrium models can be used to provide information on the economy-wide effects of microeconomic reform. They provide an insight into the inter-sectoral impacts of a policy-induced change. An important assumption behind general equilibrium models is that when the Australian economy experiences a 'shock', such as the current program of microeconomic reform, it will return to an equilibrium state. In this new equilibrium, demand equals supply in all markets. This new equilibrium position, for employment, gross domestic product etc., is notionally compared to the equilibrium 'baseline' state that would have occurred in the absence of the 'shock'.[1]

General equilibrium modelling can provide an indication of the impacts of reform (positive and negative) on various sectors and broad industry groups. By contrast, partial equilibrium analysis of the impact of a reform on an individual industry's supply and demand conditions does not take into account inter-industry relationships. Partial analysis typically does not take into account how an industry-specific reform might indirectly affect other industries. These indirect effects can feed back to the industry experiencing the reform (through changes in income, demand etc.) and modify the outcome for the industry undergoing the reform.

Economy-wide studies of microeconomic reform have used a variety of general equilibrium models, including versions of the ORANI and Access/Murphy models of the Australian economy.[2] As discussed in appendix 4, the detail and coverage of reforms included in various model scenarios have varied as the microeconomic reform agenda developed. Early modelling exercises focused on the impact of trade liberalisation. Since the late 1980s, these exercises have progressively included a much wider range of reforms. The most recent modelling exercises (for example, HILORANI) exclude trade liberalisation and concentrate on reforms designed to encourage competition.

Although the actual reform packages included have varied, they have typically covered reforms to infrastructure industries (such as transport, communications and energy utilities), various other government activities and, more recently, reforms to increase competition. The estimated impacts of microeconomic reform emerging from these models are determined by a number of factors. A key factor is the size of the 'shock' introduced into the model to account for the reform. The size of this 'shock' will be governed by:

- the assumed change in relative prices arising from the reform; and/or
- in the case of a productivity change, the associated change in relative prices arising from a change in the technical relationships between outputs and inputs.

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1 In some modelling exercises the assumption that all markets are in equilibrium can be modified. For example, simulations may allow for disequilibrium in labour markets in order to represent unemployment.

2 For a detailed explanation of the technical features of these models see IAC (1987b) and Filmer and Dao (1994).

Other key factors affecting the estimated impacts include:

- the relative economic significance of the industries directly affected by the reform;
- the significance of inter-industry linkages between the directly affected industries and the rest of the economy, net of leakages to imports;
- the responsiveness of demand and supply conditions in affected product and input markets to the assumed changes in relative prices;
- assumptions made in relation to how product price changes feed through into wage levels; and
- the mechanism by which productivity gains are distributed through the economy.

7.1.1 Where can we expect to see gains?

A key conclusion emerging from these general equilibrium studies of microeconomic reform is that the estimated effects are significantly positive and widespread. Moreover, the gains are not simply one-off benefits for a single year, but rather are on-going in nature. Table 7.1 summarises the results of some of the major general equilibrium studies which have examined the impact of microeconomic reform on the Australian economy in recent years. Appendix 4 presents a more detailed overview of these studies, including information on the reforms covered.

The studies project that microeconomic reforms increase Australia's gross domestic product (GDP) and a range of other macroeconomic variables. However, the magnitude of the increases vary. For example, the projected permanent increase in GDP, for the modelling studies summarised in table 7.1, ranges from 5.5 to 20.5 per cent. These variations are due to a number of factors including differences in the type of reforms covered, the time frames used, the base lines utilised to measure the change, and the assumptions incorporated in the modelling process.

Each of the studies indicates all sectors gain from the reforms they analyse. Overall, the impact of microeconomic reform at the sectoral and industry level tends to be positive for reforms leading to productivity gains. However, those reforms which increase foreign competition or involve changes to domestic pricing policies, lead to a mixture of positive and negative effects at the industry level.

The mining sector stands out as being a major beneficiary of the reform process. For example, in IC (1990) the mining sector captured by far the largest benefit from the reforms covered in the analysis. One explanation for the substantial growth in the mining sector is that virtually all reforms result in cost reductions for this export oriented sector (IC 1994). Some early microeconomic reform simulations, particularly those using ORANI, did not realistically constrain the mining sector's potential to increase exports in response to a change in production costs (see Yetton, Davis and Swan (1992)). The introduction of a constraint in the form of lower export supply

elasticities in more recent models, (such as IC (1990)), has lessened the estimated gains. Nevertheless, in most cases, particularly with ORANI modelling, mining has remained the major beneficiary of microeconomic reform.

Table 7.1 Some general equilibrium models projected effects of microeconomic reforms[a]

	IC '90	*BIE[b] '90*	*EPAC[c] '94*	*BCA '94*	*IC '95*
Time horizon of projections	Long run (10+ yrs)	Medium run (7 yrs)	Long run (10+ yrs)	Long run (20+ yrs)	Long run (10+ yrs)
Starting point	*1988-89 ORANI*	*1988-89 ORANI-F*	*1994 AEM-CGE*	*1994 Murphy)*	*1994 HILORANI*
Macroeconomic aggregates					
Real Gross Domestic Product	6.5	9.5	12.7	20.5	5.5
Real consumption	5.4	0.3	14.4	na	3.4
Export volume growth	17.6	11.7	na	na	15.4
Import volume growth	11.6	11.2	na	na	1.2
Aggregate capital stock	7.2	7.5	na	na	5.7
Sectoral changes					
Output					
Agriculture	2.8	6.8	12.3 [d]	22.0 [d]	4.4
Mining	32.6	22.4	12.2 [d]	35.5 [d]	18.5
Manufacturing	2.7	15.1	13.6 [d]	29.0 [d]	5.4
Services	4.4	8.8	12.5 [d]	16.6 [d]	3.4

Notes: [a] All results are expressed as percentage changes. Each column compares a reform scenario with a baseline scenario at some point in the future. [b] The BIE analysis examined a number of reform and macroeconomic scenarios. The scenario reported here compares a level playing field reform agenda to a baseline scenario that includes planned reforms as at 1988-89, but no further reforms. [c] This compares the estimates of a conservative reform scenario to an end point that excludes announced but unrealised tariff reforms. [d] Output in value-added (GDP) terms. In reform scenarios, value-added gains are usually slightly larger than corresponding output gains (e.g. HILORANI projected GDP gains of 5.5 per cent and output gains of 4.2 per cent).

Sources: IC (1990), BIE (1990), Filmer and Dao (EPAC 1994 in this table), BIE estimates derived from Filmer and Dao (1994), IC (1995b).

Unlike mining, the estimated overall positive outcomes for the manufacturing and agricultural sectors are made up of quite divergent results for individual industries within these sectors. Activity within these sectors tends to contract in the more highly assisted industries, but expands for the least assisted industries (see appendix 4 for more details). Recent modelling exercises (such as IC (1995e)) have included a wider range of reforms and the results suggest that most activities gain from the reform process.

7.1.2 General equilibrium modelling: some limitations

All models, including general equilibrium models, rely on simplifying assumptions. These assumptions have the potential to hide some of the more dynamic responses we might expect to see arising from the reform process. The models, for example,

generally assume industries are operating at their optimal productivity levels (i.e. all firms within industries are assumed to be technically efficient) because firms are assumed to maximise profits (minimise costs). As a consequence, gains arising from these models tend to rely on changes in the way resources are allocated within the economy. To some extent, the studies have modified this assumption by allowing for productivity improvements expected to arise from the reform process.

These productivity improvements are usually simulated by a reduction in the amount of labour and/or capital used to produce a given level of output. They are often based on productivity improvement estimates associated with partial studies of a specific reform, for example, rail reform. The results that general equilibrium models generate are highly dependent on the 'shocks' that are imposed. Thus the 'quality' of the partial studies used to estimate the magnitude of the 'shock' plays a key role in determining the ultimate impact of various modelled microeconomic reforms. For some reforms, there have been extensive partial studies undertaken by the BIE and IC, amongst others, to estimate the likely change in productivity as a result of reforms. These include energy generation and distribution, rail transport, aviation, coastal shipping, telecommunications and the waterfront. However, in areas where there has been little or no research, modellers are forced to use the available information and develop a 'best guess' of the probable improvement or change in specifying the appropriate 'shock'.

Beyond this, general equilibrium models do not deal with impacts at the firm level, such as the sources and causes of differences in inter-firm performances. The studies also tend to focus on the gross gains associated with a program of reform. This is particularly relevant for the static models which compare one equilibrium point with another. In these cases, the up-front or adjustment costs associated with a reform program are not identified. These costs can include labour redundancies, retraining and relocation costs, and capital losses. These costs, or even the threat of such costs, can have important effects on the way economic players react to the process of reform. Some other limitations applying to these models are briefly outlined in appendix 4.

The following section examines, in a stylised way, how microeconomic reform may impact at the firm level and highlights the importance of differential responses to reform that cannot be adequately captured in a general equilibrium framework. The section draws on insights provided by industry specific (partial equilibrium) studies.

7.2 How microeconomic reform might affect firms

The chronology of reforms outlined in chapter 2 highlights the extensive nature of Australia's reform process. Most areas of the economy have been affected by the program of reform, although the extent and pace of particular reforms has varied. Individual reforms have not been undertaken in isolation. In some instances, one particular reform may, to a lesser or greater extent, magnify the impact of another

seemingly unrelated reform. In other cases, different reforms may have countervailing influences. This is where the general equilibrium studies, referred to above, come into their own. Although the net impact of core areas of a number of reforms can be estimated relatively easily using these models, the analysis does mask many aspects of industry and firm level impacts.

Increasing competition has been a central focus of the microeconomic reform agenda in Australia. In its simplest form, this is highlighted by the phased reduction of tariffs and other forms of industry assistance. These reductions have led to increases in the level of international competition faced by import-competing firms. On the domestic front, Hilmer and related reforms have the potential to significantly increase the level of competition in the non-traded sector of the economy. Of particular relevance here are the infrastructure services provided by government business enterprises (GBEs).

Microeconomic reform has direct and indirect influences on the competitive environment faced by firms and industries. According to Porter (1990), this environment is shaped by five key forces:

(1) the threat of new entrants;

(2) the threat of substitute products or services;

(3) the bargaining power of suppliers;

(4) the bargaining power of buyers; and

(5) the rivalry among existing competitors (see figure 7.1).

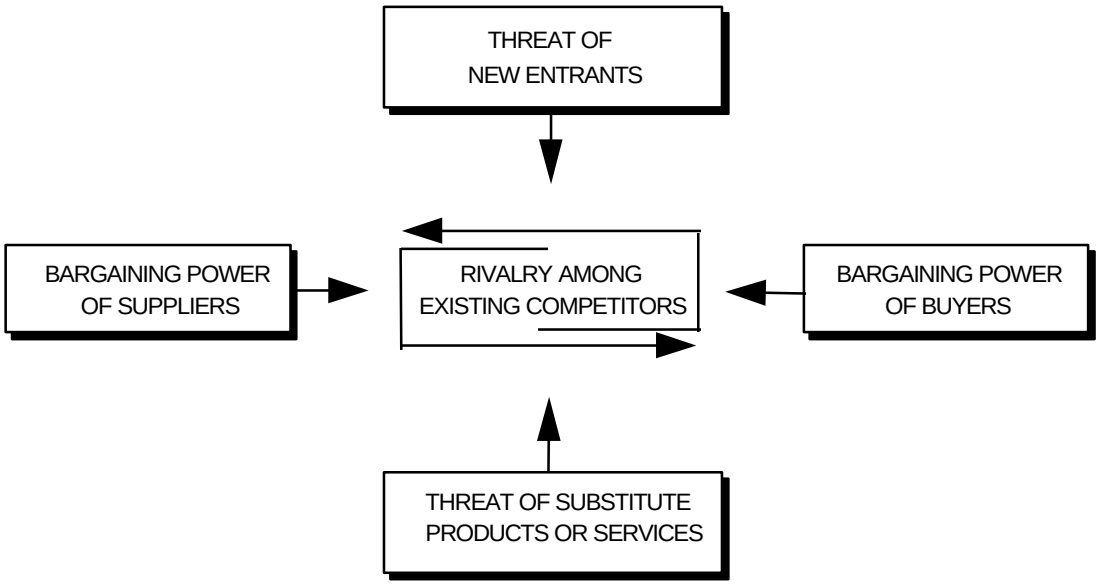
These factors affect the revenue earned by firms as well as the costs incurred for intermediate inputs and capital.

Microeconomic reforms of the type applied in Australia combine to produce direct as well as indirect changes in firms' unit revenues and costs. They have additional impacts through their effects on:

- the intensity of the threat of competition from substitute products or services (trade liberalisation and reductions in industry assistance fall into this category);
- the potential for new entrants and rivalry among existing competitors (infrastructure and competition reforms fall into this category); and
- the bargaining power of suppliers and buyers (statutory marketing, industrial relations and competition reforms fall into this category).

The intensity of competitive pressure can influence the way firms use their resources. For example, managers and firm owners in an industry with only limited competition may choose an 'easy life'. For example, they may not negotiate the hardest bargains with their suppliers and employees and may fail to implement other measures to minimise their costs of production (Leibenstein 1966). The increased competition

Figure 7.1 Forces determining industry competition



Source: Porter (1990).

arising from the reform process can countervail this. Stronger competitive pressures can impose threats on the continued existence of firms and encourage them to pursue continuous improvement strategies. As a result, firms are stimulated to seek higher levels of productivity, develop innovative products and improve the ways in which they supply their customers. This improves the ability of the economy to sustain higher real wages and returns to firm owners and thus achieve a higher standard of living for Australians.

That said, we should be mindful that Australia's reform process has not gone on in isolation. Our international competitors are also striving to reduce costs and increase productivity. This point is starkly highlighted by the BIE's international benchmarking work. This work has identified sizeable performance gaps applying to our infrastructure services industries relative to world best practice. The BIE's work highlights that being competitive is about the continuous upgrading of productive performance, as our international competitors are not standing still.

In the sub-sections that follow we consider how microeconomic reform encourages different firms to respond to changes in their operating environment. The treatment covers direct as well as indirect effects of reform and, where relevant, factors influencing the distribution of the effects of reforms between producers, workers, and users and consumers are addressed. This discussion is generalised, although use is made of examples to illustrate some actual and expected firm responses. Initially, we consider how firms in assisted industries, previously sheltered from competition, might respond to reductions in assistance (section 7.2.1). Of course, the reform process has been much broader than this and section 7.2.2 considers how reforms affect the wide

range of prices facing firms. The section comments on how these price changes affect firms' decision making and competitiveness. Section 7.2.3 discusses how microeconomic reform and, in particular, industrial relations and workplace reform might enable firms and industries to increase their productivity.

7.2.1 Assistance reductions and assisted firms

Governments have used a variety of measures to provide assistance to industry. These include tariffs, quantitative restrictions, production bounties, export facilitation arrangements and statutory marketing arrangements. However, tariffs have been the major instrument used. The reduction in tariffs has been a key component of Australia's program of trade liberalisation (see chapter 3).

In general, tariffs raise the price of the imported good in the domestic market. They allow domestic firms to charge a higher price for their products. At this higher price, domestic firms increase their output and supply a larger share of the domestic market than would otherwise be the case. The impact of a tariff reduction on import competing firms will depend on the nature of competitive pressures these firms face, as well as the capacity of individual firms to compete effectively. These pressures will in part be determined by the type of product they produce. At one extreme, firms may produce a standardised or homogenous product. For such products, competition is essentially price driven — firms are effectively price takers. At the other extreme, firms may produce a product which is highly differentiated from another firm's product. For these products, competition occurs on the basis of the price and non-price attributes of goods. The impact will also be affected by the nature of the market in which they compete. The number of firms competing in the market, for example, can have implications for the outcome.

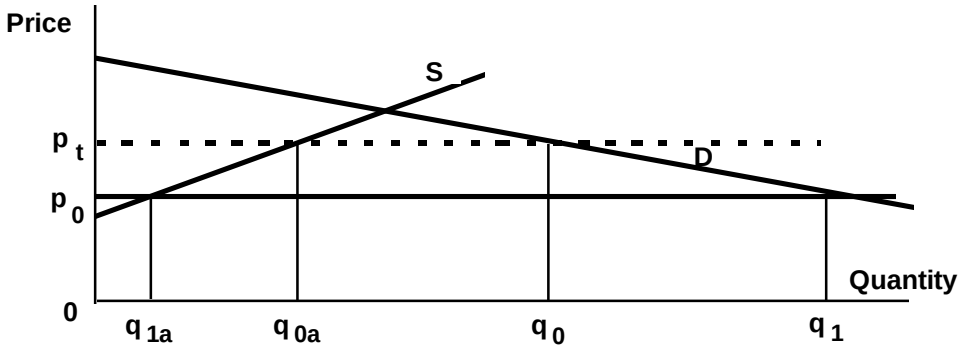
Box 7.1 illustrates the first round impact of tariff reductions for import competing industries and firms producing standardised or homogenous products. Firms are likely to experience an increase in the level of competition from foreign firms as the price of competing imports falls, reflecting a cut in the tariff. Assuming a competitive market and a relatively homogeneous product, any attempt by domestic firms to charge a price higher than the landed price of the import would result in loss of market share. This will occur because another producer's product is likely to be a very close substitute.

If all firms in the industry are price takers, the lower market price will diminish their revenue streams and, thereby, profitability. If these firms purchase their inputs in competitive markets, there may be scope to access inputs at lesser prices — offsetting some of the reduction in revenue.

Those firms that were marginally profitable prior to the tariff reduction may have to reduce their production levels or even exit the industry. This effect is likely to be more pronounced where the assistance reductions are large and the opportunities for reducing costs are limited.

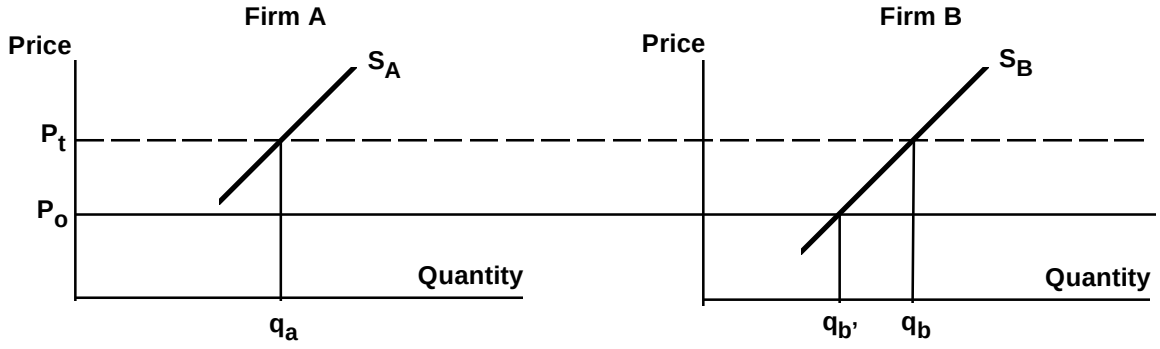
Box 7.1 The effects of removing a tariff

We can use a demand and supply diagram to illustrate the first round or 'partial equilibrium' effects of the removal of tariffs for an import-competing industry in a small country where firms compete on price. We ignore dynamic gains or other supply shifts that may result from reforms that, for example, reduce costs.



Initially, with a domestic supply schedule S and domestic demand D, imports face a tariff rate equal to (p_t—p_o/p_o). This allows domestic firms to sell their output to domestic consumers at a price p_t. This is above the world price p_o. Initially, domestic production equals q_{oa}. After the tariff is removed price falls to p_o and domestic production falls to q_{1a}. At this lower price, domestic consumption increases to q_1 and imports increase from q_o—q_{oa} to q_1—q_{1a}.

While this is likely to be the outcome at the industry level, the reduction in tariffs has differential effects at the firm level because different firms have different cost structures. We can use the same example as above to examine the potential impacts of the reduction in tariffs on firms.



Firm A (a high cost producer) and firm B (a lower cost producer) initially produce q_a and q_b, respectively. They receive price p_t (the tariff inclusive price). After the reduction in tariffs, the price falls to p_o. For firm A, with supply curve S_A, the impact of the tariff reduction is that this firm's costs of production are now higher than the new price p_o. Firm A is therefore not able to supply the market at the new price and any attempt to charge a higher price would result in no sales (assuming firms only compete on price). Thus, firm A is likely to cease production. The impact of the tariff reductions for the lower cost producer, firm B, is not as dramatic. When the price falls from p_t to p_o, firm B is still willing to supply, but a lesser quantity q_b'.

Where firms are able to differentiate their products they may respond to a reduction in assistance against imports by seeking to improve their competitive position by changing the nature of their product. This was an important response by many New Zealand firms that faced increased competitive pressures from trade liberalisation in that country (Cambell, Bollard and Savage, 1989).

Firms can endeavour to differentiate their products from their competitor's products in a number of ways. For example, firms may seek to obtain an edge in the market by focussing on quality, flexible marketing arrangements, better after sales service. Firms may also seek to supply different product variants to meet varying customer requirements. Hence, although all firms in an industry may produce the same general type of product, each firm’s product can have distinguishing features. These can set it apart, to some extent, from those of other firms in the industry.

If a firm can successfully differentiate its product it may be able to charge a premium price and, assuming cost comparability with competitors, earn a higher than industry average profit. At the same time, a new entrant into a market may seek to trade on, say superior product quality, establishing itself on the basis of value for money and capturing market share. One of the implications for domestic producers operating in such a market where barriers to entry are low is that existing producers are continuously under pressure.

Scope to compete through successful product differentiation also has implications for how such industries can respond to microeconomic reform. Box 7.2 details how the Australian citrus industry has responded to increased international competition arising from reductions in tariffs and other forms of border protection. An important aspect of the industry’s response involved the differentiation of its product from imports.

The economic literature has identified a number of potentially important impacts of import protection on firms competing in markets with few domestic players. Protection can increase the potential for these domestic firms to develop market power and sustain above ‘normal’ profitability (Caves *et al* 1981). Research by Katics and Petersen (1994) supports this view. They found that price-cost margins declined for concentrated US industries experiencing increased import competition over the period 1976 to 1986.

A lack of competitive pressure can also be a significant factor in the failure of firms to achieve minimum production costs (Leibenstein 1966). Reductions in protection should therefore lead to pressure on domestic firms’ profit margins and pressure to reduce inefficiencies in production and marketing. Reorganising the production process, reducing wastage, shedding excess staff, tighter cost controls, and investments in new technology represent different ways in which such firms can seek to reduce production inefficiencies.

Box 7.2 Product differentiation: the case of Australian orange juice

Australia's citrus fruit growing industry is characterised by a large number of relatively small producers operating in a very price competitive market. Prior to the recent phased reductions in industry assistance, producers mainly sold fresh fruit on the domestic market and supplied domestic processors with fruit, notably oranges, for thejuice market.

Production of juice took approximately 60 per cent of the Australian orange crop. Juice in the form of frozen concentrated orange juice (FCOJ) is an internationally traded commodity. FCOJ can be readily stored and transported with price being the key determinant of the source of supply. Australian producers of FCOJ, a mix of citrus grower cooperatives and public companies, faced fierce import competition. They were protected by a range of assistance measures including high tariffs (both specific and ad valorem), differential sales tax arrangements related to a local content scheme and at times, a floor price was imposed on FCOJ imports. In the mid 1980s imports of FCOJ from Brazil, Australia's major competitor, faced an ad valorem tariff equivalent of approximately 35 per cent.

Progressive reductions in the tariff applying to imported FCOJ and the removal of various other assistance measures over the period since the late 1980s led to increasing pressure on grower and processor prices. This also coincided with rapid production growth in Australia and overseas. This increase in supply placed further downward pressure on the world price and hence the tariff inclusive domestic price of FCOJ. In response to the unfavourable returns from the processing sector, growers sent more fruit to the domestic fresh market. However, this resulted in increased competition and lower unit returns in this market Growers also built up existing export markets and exploited new export opportunities for fresh fruit. Over the past five years, Australian fresh orange exports more than doubled (to about 14 per cent of production in 1994) with little change in the real unit value (ABARE 1995).

The industry also responded by differentiating its product more effectively. This entailed introducing and promoting a fresh orange juice product with a relatively short shelf life which could not use either imported or locally produced FCOJ. Consumer demand for this 'fresh style' juice has grown rapidly and production now requires about 40 to 50 per cent of oranges destined for processing.

The introduction of this fresh juice product has created an entirely new market with only very limited substitution away from other citrus products. Supplies for this new market are, in part, from fruit previously destined for local FCOJ production. Other supplies come from increases in citrus production resulting from planting decisions undertaken years before. Imported FCOJ, by definition, cannot be used as fresh Australian juice. Generally, fruit directed to the fresh Australian juice market commands a premium above the fruit directed to the local FCOJ processing sector. Citrus growers are receiving prices significantly above FCOJ import parity and are no longer bearing the full brunt of declines in assistance and

fluctuations in the world price for FCOJ.

A recent survey of 100 New Zealand firms suggests that an increase in competition does elicit such responses. The survey found that the most significant responses to increased foreign and domestic competition 'were to improve quality, reduce prices and increase the range of products' (Baird and Savage 1990, p. 17). Ergas and Wright, (1994) using data from a survey of Australian manufacturers, also found that competitive conditions are an important determinate of firms' product quality.

A depreciation(appreciation) of the exchange rate may reduce(increase) the pressure associated with reductions in assistance. As demand for imports rises in response to the lower landed duty paid price of imports there is the potential for a depreciation of the exchange rate. Such a depreciation would help offset the tariff reduction. In reality, however, tariff reductions are not once off, as assumed here, but phased. Further pressure for depreciation arising from reductions in protection tends to be hidden by other influences on the exchange rate such as changes in Australia's commodity prices and interest rates. Changes in these influences may offset the pressure for depreciation all together, such as where export prices rise. Notwithstanding this, a depreciation (regardless of its cause) occurring at the same time as tariff reductions can mask the impact of tariff reform. What is important in these circumstances is that the domestic firm's competitiveness would have been lower had the tariff reduction occurred without any depreciation.

7.2.2 Microeconomic reform and prices

Assistance reductions are not the only form of microeconomic reform which lead to changes in prices. As outlined in chapter 4, reforms to infrastructure service provision such as those underway in electricity and telecommunications have led, and will continue to lead, to changes in prices. Firms operating in all sectors of the economy stand to gain from price reductions arising from reform to infrastructure services. Assistance reductions and infrastructure reform will, to varying degrees, benefit domestic consumers and industries that use these products or services. Moreover, firms suffering a decline in tariff protection can achieve lower production costs as a result of cost reducing microeconomic reforms. This highlights the potential benefits of a broadly based approach to microeconomic reform.

Reforms that involve changes in prices, such as the removal or reduction of cross subsidies in the electricity and coal rail freight sectors, can improve resource allocation. For some infrastructure services, cross subsidies to fund community service obligations have long been a common feature of pricing. In these instances some users are 'taxed' while other users are 'subsidised' relative to a situation where cross subsidies are not applied.

Tariffs, quantitative import restrictions and statutory marketing arrangements also act as *de facto* taxes on businesses who use the assisted input. These input 'taxes'

discriminate against industries that are relatively dependent on the input in question. Those industries that benefit from cross-subsidisation or assistance arrangements are able to expand at the expense of other industries. Subsidised and assisted businesses may attract resources (land, labour and capital) that may be more productively utilised in the 'taxed' and unsubsidised industries.

The extent of the reduction in input costs associated with trade liberalisation will depend on whether or not importers are able to capture the reduced import cost (in the form of higher profits) or pass it on to the input user (in the form of a reduced price). The extent of flow on, in the short term, depends on how homogeneous the input is and the extent of competition in the product market and its key factor markets. The more homogeneous a product and the more competitive its market, the greater the extent of the pass on of the benefits of the lower tariff to users of the product. Thus, the price of a tariff assisted input, such as plastic for packaging (a relatively homogeneous product), is likely to fall to the full extent of any tariff reduction. While the price of capital equipment, which is often highly specialised, may fall to a lesser degree because business demand for specific equipment is often less responsive to price changes. The extent of competition in factor (land, labour and capital) markets will also influence the degree to which potential price reductions flow through to users. Where competition for factors, such as labour, is limited or highly specific they are likely to capture a sizeable proportion of the potential gains from microeconomic reform.

Infrastructure services are important input costs for many firms (see chapter 4). Reform of the infrastructure sector, including transport, communications and energy, has the potential to directly impact on the cost of production. Improved efficiency and productivity in infrastructure provision can have two major impacts on firms using these services. First, lower infrastructure costs *per se* will be directly reflected in lower costs of production. Second, the firm may also experience a reduction in costs through an improvement in the quality of the service, such as improved reliability. BIE studies have found that, for many infrastructure services, reliability can be more important than price. For example, liner shipping companies operate to fixed schedules and a substantial delay in a port can lead to the costly situation of having to by-pass subsequent ports and make alternative shipping arrangements (BIE 1995c).

Firms may also have more options in terms of the choice of infrastructure service providers as a result of deregulation. For example, competition reforms, such as third party access to infrastructure, may mean that the use of rail transport, for example, becomes a true alternative to the use of road for some users.

While infrastructure reform can help import competing industries offset pressures from reductions in tariff assistance, some aspects can also improve the cost structures of competing importers. Maritime and waterfront reform, for example, could lead to reductions in the landed duty paid price of competing imports and thus also make imported products more competitive on the domestic market. For export oriented

firms, cost reductions resulting from infrastructure reforms will improve their competitive positions on both the domestic and international markets. As identified by the BIE (1993), the opening up of coal rail haulage in New South Wales to competition may lead to a 20 per cent reduction in the cost of transporting coal to the port for export (see box 7.3).

Cost reductions from the reform process may also assist firms which previously focused on domestic customers to exploit export opportunities.

Improved efficiency in the infrastructure sector does not, however, always translate into lower costs for importers, domestic firms or consumers (BIE 1995d). If, for example, infrastructure suppliers have some degree of monopoly power they may be able to absorb the benefits of productivity gains due to reform. The extent to which this occurs depends on a number of factors. These include: government's dividend policy; the range of substitute products or services; and various government monitoring and regulatory instruments designed to deal with the problems associated with monopoly service providers.

Competition reform can be a useful adjunct to other infrastructure reforms (such as commercialisation) in forcing infrastructure providers to pass on the productivity benefits of reforms and to improve service quality (see chapters 2 and 4 for details of reforms in competition policy).

Price-based reforms to infrastructure, even in the absence of some monopoly pricing power, may lead to a rise in prices to users. For example, some reforms will lead to prices being realigned to reflect the true economic cost of provision. This may result in price rises. Some infrastructure pricing reforms, such as reforms to water pricing and the removal of infrastructure cross subsidies, fall into this category. The overall impact on a firm's costs will depend on its response to any price rises. Some producers may continue to demand the same quantity and hence their costs will rise. Others may adopt strategies to reduce the quantity required which, to a lesser or greater extent, may offset the price rise. For example, farmers facing an increase in the price of irrigation water may switch from surface irrigation to a less water intensive irrigation system, produce less water intensive crops or switch to dry land farming.

7.2.3 Microeconomic reform and productivity

Essentially microeconomic reform aims to improve the efficiency with which the nation uses its resources. This can occur through changes in the allocation of resources in the economy. That is different combinations of resources may be used in the same industry, or alternatively, resources may flow from one industry into another, more productive, industry. This change in the allocation of resources is a response to the realignment of prices arising from the reform process. A change in an industry's external operating environment can also be a catalyst for a firm to find new ways of competing (section 7.2.2). For example, firms' responses to increased competitive

pressures can be expected to promote higher levels of technical and dynamic efficiency.

Box 7.3 Reform, input costs and the coal industry's competitiveness

Coal is Australia's largest export. New South Wales and Queensland are the industry's major producing states. The industry employs some 26 000 people and is an extensive user of rail and port services(ACA 1994). The Australian Coal Association believes that rigidities in the labour market and high-cost rail and port services impede its international competitiveness. In part, the high prices paid for rail and port services arise from inefficiencies associated with their monopoly provision by GBEs. In addition, the state rail authorities have charged "excess freight rates" to appropriate some of the high returns available in the industry over the last few decades. In some instances, the higher profits earned by transporting coal have enabled the authorities to subsidise other users.

The reform process is leading to some reductions in coal rail and port charges. For example, since 1990-91, rail freight charges in NSW and Queensland have declined in real terms by 7 and 10 per cent respectively. However, the industry believes further reductions are warranted. For example, the industry argues that in 1993 Queensland Rail's coal freight revenue was more than $500 million in excess of the commercial norm (ACA 1994). State authorities agree that the reform process will lead to further reductions in coal rail freights. For example, the recent decision to allow competition on Hunter Valley coal rail lines "could save coal companies between $1.80 to $1.90 per tonne of coal hauled with in five years" (Fahey 1994, p. 1). Port authority charges have, to varying degrees, also declined. For example, the MSB Hunter Ports Authority reports that the average cost per tonne of using the Port of Newcastle fell from $1.06 per tonne in 1990-91 to $0.85 per tonne in 1991-92 (MSB 1992).

Over the last 5 years labour costs per tonne have increased marginally in Queensland. However, in New South Wales labour costs declined by one third. This dramatic decline in labour costs reflects changing technology, a move towards the less labour intensive open cut mines and labour market reforms. While work practices have improved there is considerable scope for further improvement (ACA 1994). Company managers argue that safety regulations are too prescriptive, reduce flexibility in the working environment and add to costs rather than contributing efficiently to making mines safer. Companies maintain that the labour savings achieved between 1987-88 and 1992-93 are mainly through increased capital expenditure per worker rather than work place reforms. (ACA 1994).

Microeconomic reform has had a positive impact on the cost competitiveness of the coal industry. Infrastructure reform has played an important role in cost reductions. Labour market reform has also played a part. However, industry believes considerable scope remains for cost savings from reforms to both the pricing and delivery of rail and port services and reforms to the labour market.

Ergas and Wright's (1994) study of Australian firms' conduct and productivity found that the intensity of competition impacts on the range of differences in firm performance in an industry. For example, they found that the dispersion in firm performance was greatest in those industries with few domestic competitors and which, until recently, enjoyed high levels of assistance (Ergas and Wright 1994, p. 85). Their analysis, however, provided only limited support for the notion that intensified competition, from any source, generates increases in productive efficiency. This finding, they suggest, may reflect the absence for their study of an accurate indicator of the intensity of competition faced by firms. However, they found a strong relationship between firms with superior performance and an export orientation for their production, rather than to competition *per se*. They believe their results suggest that:

> Involvement in the international economy provides firms with expanded opportunities to learn. Firms more heavily involved with the international economy (be it through exporting or through foreign direct investment) are more likely than are domestically-oriented firms to: systematically measure themselves up against world-best practice; focus on improving product quality and customer satisfaction; and successfully learn from customers and suppliers. All of these activities feed into productivity gains in the medium term (Ergas and Wright 1994, p. 55).

The change in incentives arising from increased competition may trigger firms to reassess their production and marketing strategies. Such assessments may lead to a change in technology or management practices. This appears to have occurred among New Zealand firms facing increased competition from their microeconomic reform process. For example, the major objectives of investment undertaken by New Zealand firms facing increased competition 'were to improve technology and reduce costs' (Baird and Savage 1990, p. 24).

While the decision to undertake investment is within the control of a firm's owners, the introduction of new management techniques often requires the cooperation of the firm's employees. Reforms to industrial relations and work place arrangements become particularly relevant in this context.

There have been a number of significant reforms to Australia's industrial relations system since the late 1980s (see chapter 5). A central aim of these reforms has been the gradual movement away from a highly centralised industrial relations system towards a greater emphasis on arrangements that allow more flexibility at the firm or enterprise level.

Recent reforms to the industrial relations system have, amongst other things, involved the promotion of multi-skilling of the workforce. Multi-skilling describes the broadening of tasks performed by individual employees. It is a central element of modern enterprise reform because it permits greater flexibility in the use of staff resources. Multi-skilling enables firms to develop internal labour markets by integrating training, skills and wages. This allows higher quality and more autonomous

team work within the firm. The enterprise agreement covering SPC provides a useful illustration of the value of this development (see box 7.4).

Box 7.4 An early enterprise agreement — the SPC case

SPC, a long established cooperative fruit canner, ran into financial problems in 1990. To redress this, SPC sold or renegotiated its interests in a number of capital draining ventures and undertook a program of voluntary retrenchments. Despite this action, the company's bankers expressed concerns over the continued funding of SPC's operations for the 1991 season. In response, SPC targeted additional cost savings of $2.5 million in order to return to profitability and improve financial market perceptions of the company.

The cooperative sought advice from an advisory committee comprised of workplace union representatives, management and staff. The committee made a close examination of the 58 awards and site-agreements as well as all over award payments and proposed a package of 11 points be put to the workforce. The proposed package involved workers giving up a number of conditions of work. It also involved a 3 per cent reduction in wages for a period of 12 months. However, the Victorian Trades Hall Council and the ACTU expressed concern that the package involved a weakening and reduction in award conditions. They argued that savings should only be made by reducing over-award payments. Ultimately SPC and the unions agreed to achieve savings by removing over-award payments. The SPC workforce later ratified this agreement. The enterprise agreement and the initial redundancy package resulted in:

- a cut in employees and management's nominal wages and reductions in over-award conditions;
- the removal of some 'non-productive' paid time such as additional rest breaks;
- 'on-cost' savings of $100 000 resulting from electronic funds transfer of wages; and
- substantial productivity increases, with the number of cartons filled per hour rising from 6.7 in 1990 to 8.8 in 1991.

With the implementation of this agreement, financial pressures from SPC's banks declined By February 1991, SPC reported its first ever, first quarter profit. Subsequently a combination of factors including the depreciation of the Australian dollar, lower interest rates, crop failures in competing countries, and public support for SPC's products contributed to a rapid improvement in profitability. The turnaround in SPC's fortunes was so significant that the original 12 month agreement terminated seven months early.

By the end of 1991, SPC paid back the workforce's earlier wage reduction. The cooperative also paid fruit growers a bonus in recognition of depressed fruit prices and was still able to record a $6.7 million profit.

Source: IC (1993b).

Reforms involving reductions in the number of unions within an industry or enterprise have the potential to reduce demarcation disputes and improve management and labour communication.

A major thrust of the industrial relations reform process has been the introduction and promotion of enterprise level agreements. Enterprise agreements allow employers, employees and unions to work together to develop and agree on work and management arrangements better suited to their specific workplace circumstances. In effect, they encourage a shift in responsibility away from the centralised wage system and distant third parties (such as national union and employer organisations) to parties that have a direct involvement, understanding and interest in the workplace.

As evident from appendix 3, reform through enterprise based agreements can lift productivity in a number of ways. These include: increased flexibility of work shifts; improved and more efficient work practices (resulting in improved product quality and lower wastage and scrapage costs and easier absorption of new production techniques); streamlining of union workplace coverage; and better management techniques. Enterprise level agreements have the potential to improve a firm's flexibility to adapt and succeed in an environment of increased competition. They could play a significant part in maintaining and/or improving an individual firm’s competitive position.

General equilibrium studies indicate labour market reforms and improved labour productivity flowing from other microeconomic reforms are an important source of gain from the overall reform process. In many cases, the models suggest that improvements in labour productivity are one of the main sources of gains to the economy (see appendix 4). However, these models cannot take into account a number of the more dynamic effects likely to arise from the reform process which have been discussed in section 7.2.

7.3 Concluding comments

The microeconomic reform process aims to increase Australia’s standard of living by increasing productivity and reducing costs of production. This will allow us to increase, or at least maintain, in a relative sense, the nation’s level of income. While the overall aim of the reform process is clear, the ultimate distribution of the benefits is not intuitively obvious. By contrast, the costs associated with the reform program are often much more transparent. This is because the gains accrue over time and are widely dispersed throughout the economy, while the costs tend to be experienced early in the reform process and are more concentrated.

This chapter has outlined how various microeconomic reforms could impact on firms and the economy. We can make some observations about the impact of particular reforms at the firm level. However, as many reforms are underway at the same time, some having positive impacts with others having negative impacts, these observations often fail to adequately capture the full effects. The net effect of reform on an

individual firm or industry is, therefore, not clear-cut. Nevertheless, it is clear that the reform process is not costless. Some firms in assisted industries may downsize or even go out of business as a result of reductions in assistance. Reforms to infrastructure industries often involve redundancies within these industries. This will generally lead, at least in the short term, to an increase in the number of unemployed.

At the same time, many firms will be able to take advantage of cost reductions and opportunities that arise as a result of structural change induced by microeconomic reform. Export oriented industries, in particular, can be expected to gain from the reform process. Firms in export industries, directly, bear little of the cost of the reform process and have the potential to take advantage of cost reductions flowing from many reforms. Overall, the economy should be able to increase its productivity and produce more with the same or even less resources.

The impact of microeconomic reform on individual firms depends, first, on how each firm chooses to react to the immediate pressures arising from the process of reform. It also, subsequently, depends on the second-round effects that emerge. Although some firms adversely affected by reforms may simply go out of business, others may make significant changes to their operations. This can lead to improved performance and profitability. These individual, firm specific, responses to change are therefore a very important feature of the microeconomic reform process. Firms facing the same set of pressures may take very different restructuring paths. While economic theory and general equilibrium modelling can shed some light on the potential impact of microeconomic reform on firms and industries, little hard evidence is available.

Detailed analysis by case studies of industries and firms which have experienced the reform process will help address this information gap. The BIE, as part of its *Monitoring Micro Reform* program of work, is undertaking a series of case studies to assess the impact of microeconomic reform on firms. The next chapter outlines the BIE's future work program for this project and gives details of the industries chosen for the first two case studies.

8 Future directions: the work program

In the report so far, we have examined the evolution of the microeconomic reform agenda and discussed how reforms in some key areas are likely to impact on firms and industries. In this chapter we provide a rationale for the use of a case study approach in examining the impact of microeconomic reforms at the firm and industry level. We also outline the BIE's future work program, including key case studies to be undertaken as part of the *Monitoring Micro Reform* project.

8.1 Case study approach

As discussed in chapter 7, microeconomic reform is likely to have differential impacts on industries in the economy and individual firms within an industry. A key determinant of how microeconomic reform impacts on the economy are the individual responses of firms to the changed environment. Firm and industry specific characteristics, as well as, the nature and extent of individual reforms are likely to shape firms' responses to change.

The BIE, therefore, considers a case study approach, pitched at the firm level for particular industries, is the most appropriate research vehicle to assess the impact of microeconomic reform. The BIE judged alternative approaches, covering analysis of input-output tables for selected industries and sectors and data available at the industry level from surveys conducted by the Australian Bureau of Statistics (ABS), as inappropriate. In the main, this reflects the high level of aggregation in these data and the absence of the necessary detail to systematically pair particular reforms with impacts at the firm/industry level. Put simply, important drivers of differences in the impact of reform can only be adequately captured through detailed firm and industry level studies. This assessment was spelt out by the BIE in an issues paper released for comment in September 1994. The BIE circulated the paper to over 30 industry groups and government agencies. Feedback on the paper indicated wide support for the *Monitoring Micro Reform* project, its objectives and the proposed case study approach.

On the basis of this feedback and the BIE's own analysis of relevant issues, case studies will aim to assess individual firms' reactions to the process of microeconomic reform. The case studies will, in part, rely on survey data and face-to-face discussions with firms. The analysis will be **quantitative** and **qualitative** in nature. Where appropriate and feasible, the analysis will look at the extent of differences in the process of reform at the state level.

The survey questionnaires will require firms to report their observations/insights into microeconomic reforms which have occurred over a period of time (typically between 1989 and the present). The questionnaires will also request some time series financial and employment information. In addition, firms will be requested to provide details of changes in, for example, operating structure, investments, products or services produced and human resource management. Thus, in addition to perceptions about what has happened to the firm and why it has happened, the survey will also record the performance of the firms over time. Where possible, changes in firms' performance will be linked to changes in the operations of firms which capture their responses to microeconomic reform.

The BIE will ask firms to indicate their perceptions of how a range of microeconomic reforms have impacted on the competitiveness of their business. Table 8.1 summarises these reforms. On the basis of this information and with reference to the type of reform and the operating characteristics of respondents the BIE plans to rank the reforms which have made the greatest contribution to firms' competitiveness.

Table 8.1 Microeconomic reforms

- Australia's tariff reductions
- Industrial relations reforms
- Changes to product standards & regulations
- Coastal shipping reforms
- Rail transport reforms
- Electricity reforms
- Water supply reforms
- Statutory marketing arrangement reforms
- Changes to taxes on inputs/on-costs
- Road freight reforms
- Aviation reforms
- Telecommunications reforms
- Gas reforms
- Environmental regulation

The case studies will also provide opportunities for firms to indicate which of the reforms listed in table 8.1 are operating well, and which reform areas are lagging and in need of further attention. Firms will be requested to assess the adequacy or otherwise of the pace of current reforms. Firms will also be asked to indicate their perceptions of the most important reforms for their future competitiveness. They will also be given an opportunity to comment on any other initiatives, within the control of governments, which could be practically taken to improve their competitiveness.

As discussed in chapter 7, initiatives directed at increasing the level of competition have been a central feature of the microeconomic reform process. The case studies will aim to assess whether firms have experienced any change in the level of competition they face. Firms will be asked to indicate the factors (including microeconomic reforms) which have contributed to any change. Firms' responses to changes in the level of competition will also be examined. For example, the studies will aim to examine the impact of the reform process on:

- firms' revenue and cost structures;
- levels of production, products produced and sold;

- levels of input usage covering capital, labour, and materials; and
- individual firms' productivity over time; and investment levels (ie. equipment and R&D).

Information will also be sought on whether firms have:

- differentiated their products through, for example, changing product quality;
- changed their patterns of assembly to improve the quality and/or reduce their costs to make and sell;
- changed the suppliers used to source their inputs or required existing suppliers to improve their operations and, if so, how;
- sought out new markets - domestic and/or export;
- changed their relations between management and workers; and
- instituted best practice techniques and, if so, in what areas, and with what effects.

As discussed in chapter 7, the reform process is expected to induce productivity improvements. Data obtained from firms will allow the BIE to assess whether improvements in productivity have occurred. The questionnaire data should also allow an assessment of some of the main drivers of any productivity improvements. For example, firms will be asked to indicate the significance of certain industrial relations reforms, management and workplace reforms to changes in productivity. Firms will also be requested to rank the importance of contributing factors.

The case studies will also endeavour to gauge whether microeconomic reform has expanded firms opportunities to export. For example, firms will be asked to indicate which factors have contributed to any change in their export intensity.

Microeconomic reform has also seen substantial changes in the environment in which management and workers operate. The answers to the questionnaires will allow the BIE to gauge the extent to which industrial relations reforms have been implemented in the workplace and whether management's relationships with its employees have changed over the last few years and, if so, what factors have contributed to the change.

Overall, the case study approach is expected to provide valuable insights at several different levels covering:

- the main impacts of microeconomic reform on the activities, operations and performance of firms;
- the significance of micro-economic reforms relative to other influences shaping changes to firms' operations over time;
- key drivers of differences in the experiences of firms within particular industries;
- the nature and extent of the dynamic effects of microeconomic reform on firms;

- firms' assessments of the relative importance of different reforms to their operations; and
- firms' views on the need, if any, for additional reforms having regard for the nature of their operating environment.

8.2 Choice of case studies

The BIE currently envisages that the *Monitoring Micro Reform* project will encompass a suite of case studies over a two to three year period. Work is already well advanced on the BIE's first case study which is examining the agri-food industries. The BIE recently commenced a second case study covering the automotive industry. Both these industries were foreshadowed as potential case study candidates in the BIE's Issues Paper referred to earlier. Feedback from government and industry sources indicated that these industries were viewed as good candidates for case study analysis. Other areas currently being evaluated as potential case studies include: mineral processing; tourism; textiles, clothing and footwear; chemicals and financial services. The rationale for selecting the agri-food and automotive industries as the initial case studies is briefly discussed below.

8.2.1 Agri-food industries case study

Australia's agri-food industries account for over 20 per cent of the manufacturing sector's output and 18 per cent of its employment. These industries comprise a wide range of export oriented as well as import competing activities. In 1992-93, agri-food products accounted for around 25 per cent of all manufactured exports and 5 per cent of manufactured imports.[1]

Recent studies of the performance of the agri-food industries by the Australian Academy of Technical Sciences and Engineering and the Prime Minister's Science and Engineering Council have drawn attention to the importance of microeconomic reform for these industries (DPM&C 1994 and AATS&E 1994). Both studies stressed the need for an acceleration in the pace of microeconomic reform.

A number of key microeconomic reforms have been identified as being relevant to the agri-food group of industries including:

- reforms to statutory marketing arrangements for agricultural products;
- reductions in assistance to agriculture and manufacturing;
- labour market reforms;
- infrastructure reforms;

1 BIE estimate, based on ABS data presented in IC (1995e).

- mutual recognition of regulations including product standards; and
- reforms to government services such as export inspection.

Agri-food industries have strong linkages to up-stream (eg to the agricultural sector) and down-stream industries (eg food processing machinery manufacturers and suppliers and packaging manufacturers). This feature should enable the case study to provide a broader view of the impact of microeconomic reform.

Despite the agri-food industry's sizeable contribution to the manufacturing sector's turnover and exports, significant segments of the industry have been perceived as inward looking and in danger of losing market share to imports. For example, the Food Processing Reference Group (FPRG 1991) suggests that the perishable nature of certain products and the low value/weight ratios of simply-processed products provides some agri-food industries, or products, with a degree of natural protection. The FPRG reported that this protection, coupled with strong domestic demand, has encouraged 'an entrenched resistance to achieving international competitiveness' (FPRG 1991, p. I). The FPRG also identified a range of external impediments to the sector's performance. These included 'corrupt' world markets, the high assistance provided to other Australian industries and high transport costs.

With a view to encouraging a more outward looking and internationally competitive industry, the federal government announced an Agri-food Industries Strategy in July 1992. According to DITARD (1993, p. 16):

> Under the Strategy, specific programs focus on building Australia's image as an exporter of clean food, improving industry language and literacy skills to assist workplace reform, benchmarking and industry networking. A Processed Food Market Access Committee coordinates and focuses industry and government efforts to achieve better access to overseas markets.
>
> An Agri-Food Council, comprising leaders representing the major interests in the industry, has been established to provide overall strategic direction to the initiative and to assist in facilitating communication between stakeholders.

The Strategy has the potential to be a catalyst for achieving further microeconomic reform within the agri-food industries.

The Agri-Food Council has given its support to the agri-food case study and a Steering Committee has assisted the BIE in identifying key industry segments for analysis. The committee has also provided comments which assisted with the development of a survey questionnaire and is providing on-going feedback to the BIE on the study. The responsible program area within the Department of Industry, Science and Technology and a number of key firms within the industry have provided the BIE with sponsorship in support of the study. This support has enabled the BIE to undertake a more comprehensive analysis than otherwise would have been possible.

The BIE utilised the ABS business register to undertake a survey of approximately 1 500 firms with five or more employees in the following agri-food industries:

ANZSIC	Industry	ANZSIC	Industry
2111	Meat processing	2171	Sugar manufacturing
2121	Milk and cream processing	2172	Confectionery manufacturing
2129	Dairy products n.e.c.	2174	Prepared animal and bird feed
2130	Fruit and vegetable processing	4715	Fruit and vegetable wholesaling
2151	Flour mill products manufacturing	2863	Food processing machinery
2151	Cereal food & baking mix		

The BIE also utilised the Packaging Council of Australia's membership list to survey the major food packaging manufacturers.

The industries surveyed produce a mix of products which either compete with imports, are export oriented or face little international competition. Product coverage ranges from those which are minimally processed to those involving extensive processing. A wide range of past, present and potential microeconomic reforms appear to be highly relevant to these industries.

The agri-food questionnaire was sent out to targeted firms in May 1995. This followed extensive consultation with the ABS on the design and development of the questionnaire and a pilot testing of the questionnaire with some 35 firms. The data gathering aspect of the survey work was completed in August 1995. The BIE expects to report the results of its analysis around April 1996.

8.2.2 Automotive industry case study

The passenger motor vehicle and parts industries represent a significant share of Australian manufacturing output. The majority of the industries production competes with imports. The industry (along with the textiles, clothing and footwear industries) has been one of the most highly assisted manufacturing industries in Australia, with an effective rate of assistance of over 30 per cent in 1995-96. This level of assistance is well above the average for manufacturing as a whole of 8 per cent. Despite this disparity, assistance to the industry has declined substantially since the mid 1980s and will continue to decline to the year 2000.

Given this background, the automotive industry was judged to be an appropriate case study for a number of reasons including:

- the process of trade liberalisation, a key element of the microeconomic reform process, has presented the industry with a significant direct challenge to improve its competitiveness in the face of much lower assistance levels; and

- the industry and other players (including the Industry Commission) have identified the wider process of microeconomic reform as having an important impact on the international competitiveness of the industry — as well as its capacity to adapt to a lower tariff assistance regime.

A case study of the automotive industry is also likely to provide a useful input to the Government's review of the industry's post 2000 assistance arrangements. This review is expected to commence in 1996.

The automotive industry program area within the Department of Industry, Science and Technology, the Federal Chamber of Automotive Industries and the Federation of Automotive Products Manufacturers have agreed to part-sponsor this case study. Again, this will enable the BIE to undertake a more detailed case study than otherwise would have been possible. The case study commenced in September 1995 and, at this stage, is expected to be completed by around September 1996.

8.2.3 Other case studies

Case studies to be undertaken after the completion of the agri-food and automotive projects will be chosen from industries within the manufacturing, mining and service sectors. Industries currently being considered as potential case studies include: mineral processing; tourism; textiles, clothing and footwear; chemicals and financial services. The final choice of case studies will be based on a range of factors including:

- the economic significance of the industry;
- the coverage and relative importance of microeconomic reforms to the industry; and
- the economic characteristics of the industry — industries with a diverse mix of economic characteristics may allow for a richer understanding of the reform process and its impacts on firms and industries.

8.3 Future work program

Currently the BIE plans to undertake two further cases studies following completion of the agri-food and automotive industries case studies. Beyond this, it is possible that the BIE will undertake a further one or two case studies. At one stage, the BIE had contemplated undertaking a detailed and comprehensive 'economy wide' survey as an element of the project. However, feedback from the ABS and industry suggests that such an approach is unlikely to generate an adequate response rate. In view of the already high level of information requests to industry from various government agencies, the BIE has decided not to proceed with such a survey.

With the completion of the case study phase of the project the BIE currently envisages at least three potential further dimensions to the overall project. These involve:

- preparing a synthesis report drawing out the main findings and lessons to emerge from the case studies;
- following up a selection of firms in the earlier case studies and undertaking an interview-based analysis. The number and variety of firms could be extended by selecting additional firms from a cross-section of manufacturing and service industries. This analysis could, amongst other things, be directed at identifying the impacts of microeconomic reform on firm growth experiences; and
- examining the feasibility of drawing on the results of the case studies and interview based analysis to:
  - enhance future economy-wide modelling exercises through the use of the richer data base provided by this project; and
  - review the main areas in which the case studies provide insights different from those obtained through general equilibrium modelling exercises.

Appendix 1 Chronology of key microeconomic reforms in Australia

Much of the microeconomic reform agenda in Australia has evolved over the past decade or so. This process has included governments at all levels and an array of reforms that have impacted on most areas of the economy, although to varying degrees. The table below, while by no means comprehensive, provides a chronology of some of the key events that have helped to shape Australia's microeconomic reform process. It focuses largely on Commonwealth Government initiatives.

Table A1.1 Some key events in the evolution of microeconomic reform in Australia

Date	*Reform/Event*	*Description*
1981-82	**Reducing controls on banks**	These included: reducing restrictions on assets and liabilities which banks could hold; the development of the treasury note; and the introduction of the tender system for selling government securities.
1983	**Floating of $A Removal of exchange controls**	Floating of the Australian dollar and removal of foreign exchange controls.
	The Accord	First Accord between the Government & the ACTU.
	Industry plans	From 1983 onwards, the Government began implementing industry plans, including plans for the steel, passenger motor vehicle, ship building, heavy engineering and the textiles, clothing and footwear industries.
1985	**Business Regulation Review Unit established**	The BRRU's role involved assessing the impact of regulation on business and screening all new Commonwealth regulations to ensure they were efficient, cost effective and avoided duplication.
	National Tax Summit	A summit held in July 1985 to discuss major tax reform options. In September 1985, the Government announced a less ambitious tax package that included: the introduction of fringe benefits tax; capital gains tax; a new foreign tax credit system; reductions in personal income tax and a full dividend imputation scheme for company taxation.
1986	**The Treasurer's 'Banana Republic' comment**	'Once you slow the growth under 3 per cent, unemployment starts to rise again....Then you are gone; then you're a banana republic'.

Date	*Reform/Event)*	*Description*
1987	**Two tier wages system**	The AIRC established two tier wages system in March 1987.
	Guidelines on GBEs	Guidelines set down for Commonwealth statutory authorities & GBEs. These guidelines established processes for defining GBEs objectives.
1988	**Oil marketing deregulated**	Deregulation of crude oil marketing arrangements took effect from January 1988, resulting in a free market for crude oil and refined petroleum products.
	IAC inquiry program extended	IAC's inquiry program extended to cover inquiries into impediments to efficiency and competitiveness of the whole spectrum of industry.
	Passenger motor vehicle assistance plan revised	The revised plan removed import quotas, effectively removed the local content arrangements for components and reduced the tariff rate from 57.5 to 45 per cent.
	Commonwealth Government's May 1988 Economic Statement	The statement announced: • tariff rates greater than 15 per cent were to be phased down to 15 per cent by 1992 and tariffs between 10-15 per cent were to be phased to 10 per cent over the same period; • textiles, clothing and footwear plan would be accelerated; • 2 per cent revenue duty on imports would be abolished; • removal of the embargo on sugar imports and its replacement with a tariff (initially set at a rate of $115 per tonne); • tax reforms: removal of gold mining income taxation exemption; depreciation to be based on effective life; changes to treatment of foreign source income & superannuation; • removal of government's day-to-day controls over Commonwealth GBEs and removal of their tax exemptions; and • termination of two airline policy and introduction of competition in telecommunications.
	Industrial Relations Act 1988	This Act became effective from March 1989. It provided a framework for decentralising the wages system and facilitating workplace reform. The legislation introduced the first federal provision for the certification of enterprise agreements.
1989	**Waterfront Industry Reform Authority established**	WIRA implemented extensive changes to employment structures, management and work practices, training and career structures over a three year period.
1990	**Industry Commission established**	IC established as the Commonwealth Government's major review and inquiry body on structural reform. The IC absorbed the functions previously performed by the IAC, the Inter-State Commission and the BRRU.

Date	Reform/Event	Description
1991	***Commonwealth Government's Building a Competitive Australia Statement***	The statement announced that: • the general level of assistance would be phased down to 5 per cent by 1996; • tariffs on passenger motor vehicles would be phased down from 35 per cent in 1992 to 15 per cent in 2000; tariff reductions on textiles, clothing & footwear to be accelerated so that maximum TCF tariff is 25 per cent by year 2000 & the termination of TCF quotas brought forward to 1993; • exemptions from sales tax for business inputs be widened & changes to depreciation provisions be introduced 'to bring them more into line with business realities'; and • BIE would be commissioned to undertake research on international performance benchmarking of infrastructure services supplied to businesses.
	Special Premiers' Conference	Agreement reached in July 1991 to: • commence national performance monitoring of GBEs; • establish the National Rail Corporation; • establish a National Grid Management Council for electricity; and • introduce a reform package for the heavy vehicle road transport sector, including implementing full cost recovery charges by July 1995.
	Australian Industrial Relations Commission endorsed enterprise bargaining	The AIRC's October 1991 National Wage Case decision established the enterprise bargaining principle for agreements between firms and (unionised) employees in the federal system.
1992	**Commonwealth Government's One Nation statement**	Initiatives announced included: • proposals for developing integrated infrastructure networks — interstate electricity grid and a national standard gauge rail highway; • proposals to promote competition between electricity generating systems; and by allowing further entry of foreign banks; and by reducing barriers between domestic & international aviation sectors; • further amendments to industrial relations legislation to encourage workplace agreements; • introduction of a new system of vocational education & training; and • changes to tax rules to encourage investment.
	Council of Australian Governments	COAG established in May 1992.
	Mutual recognition of regulation agreement	The Commonwealth, state and territory governments agreed to remove regulatory barriers to goods and services trade between the states. The agreement came into effect in March 1993.

Date	*Reform/Event*	*Description*
1992	**Inquiry into competition policy**	(Hilmer) Committee of Inquiry into a National Competition Policy established in October 1992.
	Expanded role for the Industry Commission	Expanded role for IC included new industry development references and an enhanced role for the states and territories.
1993	**Hilmer report**	Main recommendations of Hilmer review were to: • pursue a national competition policy; • extend the Trade Practices Act; • implement policy principles to regulate monopoly power in certain markets; and • establish a National Competition Council and an Australian Competition and Consumer Commission.
	***Industrial Relations Reform Act 1993* introduced**	The act, which became operative in March 1994, further facilitates enterprise bargaining, particularly in non-unionised workplaces. It also introduced equity features to protect employees in accordance with international conventions.
1994	**Special Premiers' Conference**	Agreement reached for a review of Commonwealth and state services provision.
	Meetings of Council of Australian Governments	Feb 1994 — meeting of the COAG gave in principle endorsement to the competition policy principles of the Hilmer report. Aug 1994 — COAG meeting agreed, in principle, to a package of competition policy reforms and transitional arrangements.
	Special Premiers' Conference	Agreement to establish a process for achieving tax uniformity and competitive neutrality between activities undertaken by GBEs and the private sector.
	Commonwealth Government's Working Nation Statement	Initiatives announced included: • introduction of a training wage, changes to social security benefits to reduced disincentives to work, and establishment of the National Employment and Training Taskforce; • decision that tariffs would remain at a maximum of 5 per cent beyond 1996; • establishment of an enhanced regulatory review process; additional resources provided for the Business Regulation Review Unit; and a new Council of Business Representatives to advise Cabinet on regulation review and reform; and • BIE commissioned to monitor the impact of microeconomic reform on industries and firms; and international performance benchmarking of infrastructure services extended to 1998-99, with the addition of benchmarking of government services to business.

Date	*Reform/Event*	*Description*
1995	**Agreement on national competition policy**	The Commonwealth, state and territory governments agreed to a new national competition policy. Major initiatives included agreement to: • apply a set of principles to govern the operating environments of GBEs; • extend the reach of the Trade Practices Act; • establish the Australian Competition and Consumer Commission and the National Competition Council; • introduce new access regimes for essential facilities; and • pass legislation, at the state and territory level. applying to anti-competitive rules.
	Implementation of aspects of national competition policy	The Assistant Treasurer announced on 31 October 1995 that: • the Australian Competition and Consumer Commission and the National Competition Council will commence operations on 6 November 1995; • a new access regime for essential facilities will also come into effect on 6 November 1995; • prices surveillance will be extended to state and territory GBEs; and • trade practices law is expected to be extended to areas beyond Commonwealth jurisdiction from 21 July 1996.

Appendix 2 Infrastructure prices and quality

Infrastructure services, to varying degrees, contribute to costs of production in all industries and, consequently, can influence the competitiveness of Australian firms. The cost of infrastructure services accrues through services used directly by a firm. Infrastructure costs also accrue indirectly through the passing on of infrastructure service costs used in the production of intermediate inputs. The BIE estimates that the cost of infrastructure service inputs to those of final output vary between industries and ranges from around 7 to almost 27 per cent (see chapter 4).

Infrastructure services also influence a firm's cost of production through their quality. For example, firms expect infrastructure services to be reliable and this reliability (or the lack of it) is factored into production, investment and marketing decisions. A lack of reliability can impose costs on the firm which are usually not reflected in the price paid for a service. Hence, both price and quality are important aspects of infrastructure provision. This appendix reviews changes in the price and quality of key infrastructure services during the reform process. The review, where possible, also includes an international dimension by drawing on past BIE studies which have benchmarked Australian infrastructure prices and quality against world best practice. A detailed overview of the results of these studies is provided in BIE (1994a and 1995b).

The appendix covers the following infrastructure service industries; electricity, natural gas, water, telecommunications, waterfront, coastal shipping, aviation, rail and road freight.

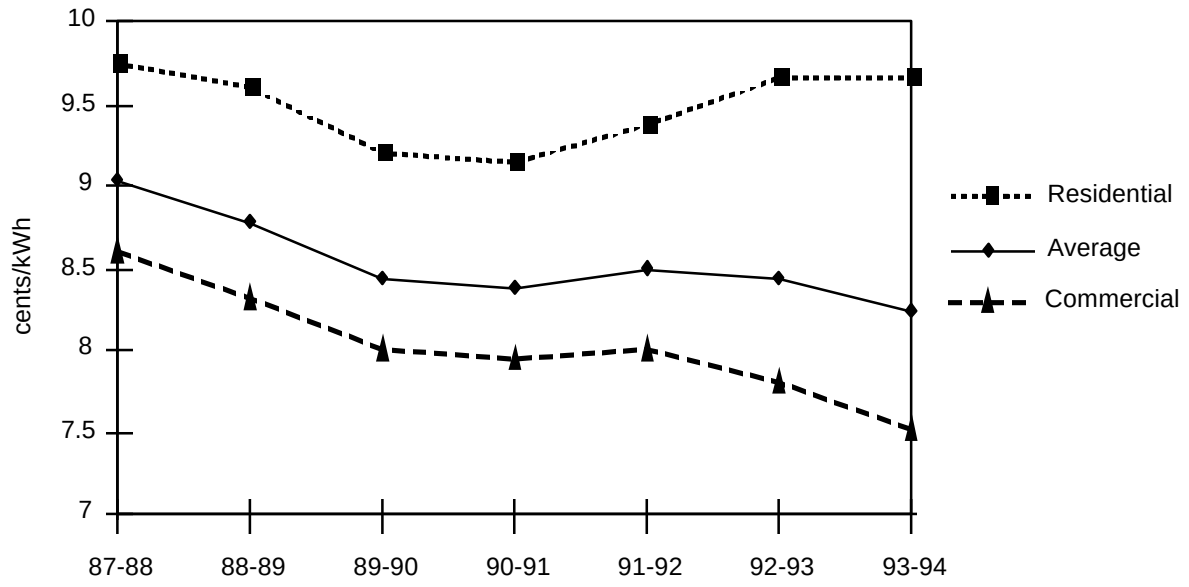
A2.1 Electricity

Reforms to the electricity industry, including commercialisation, corporatisation, privatisation, pricing reforms, and, more recently, reforms aimed at increasing competition, have resulted in an improvement in the overall performance of the industry. This is reflected in both an increase in dividend payments to governments and a fall in real electricity prices.

Real electricity prices in Australia have fallen, on average, by about 9 per cent over the period 1987-88 to 1993-94 (figure A2.1). Pricing reforms have seen state electricity utilities reducing cross-subsidies between users. The electricity utilities have reduced prices to large customers, such as commercial and industrial users, while keeping real prices for residential customers relatively unchanged. Figure A2.1 shows residential electricity prices declining, on average, by around 1 per cent, between

1987-88 and 1993-94. Average prices for commercial users have declined by about 12.5 per cent.

Figure A2.1 Average real electricity prices, 1987-88 to 1993-94



Note: Prices are in 1989-90 dollars.
Source: ESAA (1995).

The nature and pace of pricing reforms have varied between states. Price restructuring between consumer categories has occurred in each of the states, although to varying degrees (table A2.1). In most states, this has resulted in a substantial real reduction in commercial and/or industrial tariffs with an increase or a smaller decrease in the real prices paid by residential consumers. In New South Wales, for example, average real electricity prices for industrial users declined by around 14 per cent over the period 1987-88 to 1993-94. Over the same period, average real prices paid by commercial users declined by 24 per cent. This compares with a small increase in residential prices of less than 1 per cent over the same period.

But cross-subsidises still remain in the electricity industry. By way of example, figure A2.2 illustrates Sydney Electricity's cost recovery levels for domestic and general supply over the period 1992-93 to 1995-96. The figure shows that while domestic supply fails to cover costs, general supply more than covers its costs. It also shows that although cross subsidisation between domestic and general supply has been reduced in recent years, substantial cross-subsidisation still remains (i.e domestic supply continues to make losses while general supply more than covers costs).

Table A2.1 Real electricity prices by states, 1987-88 to 1993-94[a]

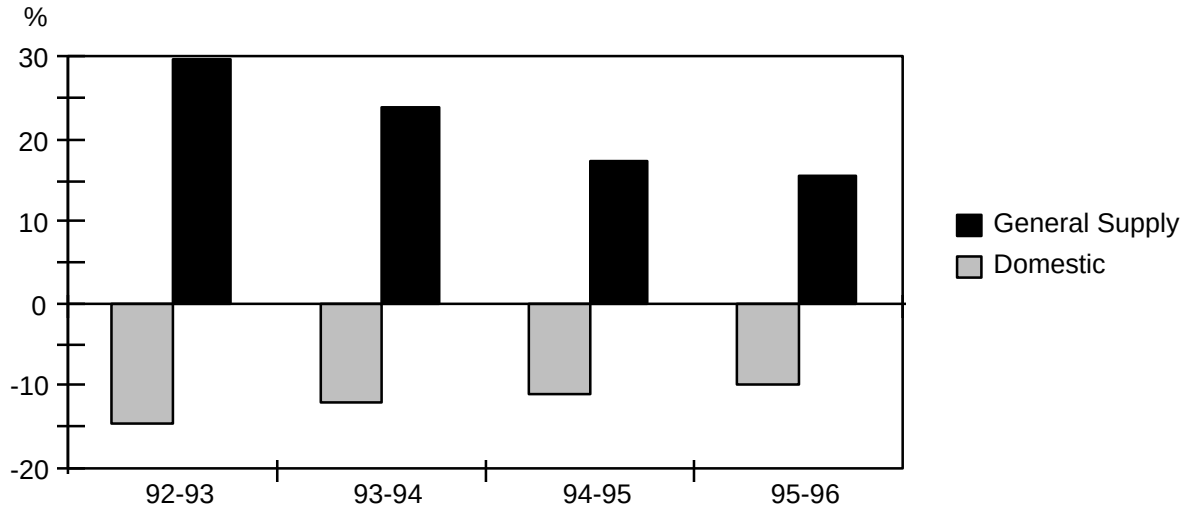
	1987-88 *c/kWh*	*1990-91* *c/kWh*	*1993-94* *c/kWh*	*% change 87-88 to 93-94*
New South Wales				
Residential	8.82	8.58	8.84	0.23
Commercial	15.53	14.89	11.87	-23.57
Industrial	6.82	6.54	5.86	-14.08
Victoria				
Residential	9.98	9.44	11.32	13.43
Commercial	13.45	12.38	11.27	-16.21
Industrial	6.68	5.87	5.75	-13.92
Queensland				
Residential	10.65	8.88	8.80	-17.37
Commercial	12.12	10.03	9.76	-19.47
Industrial	6.24	5.43	5.71	-8.49
South Australia				
Residential	10.35	9.51	9.85	-4.83
Commercial	13.93	11.95	10.75	-22.83
Industrial	8.58	7.21	6.46	-24.71
Western Australia				
Residential	13.85	13.02	12.53	-9.53
Commercial	12.33	11.48	10.62	-13.87
Industrial	na	na	na	na
Total Australia				
Residential	9.75	9.13	9.66	-0.92
Commercial	8.59	7.95	7.52	-12.46
Industrial	na	na	na	na
Average	**9.04**	**8.38**	**8.22**	**-9.07**

Note: [a] Prices are in 1989-90 dollars. **na** Not available.
Source: ESAA (1995).

As discussed in section 4.1, electricity is one of the major infrastructure inputs used by industry. For this reason, reductions in real electricity prices can be expected to have important implications for the competitiveness of Australian industries. These reductions, however, will only lead to improvements in our international competitiveness if we improve or maintain our ranking with our competitors' electricity prices. The BIE (1994b) has found that on average, Australia's electricity prices for industry were amongst the lowest in the world in 1992. Only New Zealand and Canada had lower industrial prices than Australia, although both of these countries have a higher proportion of relatively cheap hydro electricity than Australia.

While Australia is a relatively cheap electricity country from the perspective of industrial customers, the BIE (1994b) also found there were small pockets of industrial customers within Australia who were paying high prices for electricity relative to their international counterparts. These pockets of disadvantaged industrial customers were most pronounced amongst low volume industrial users of electricity in Western Australia and, to a lesser extent, New South Wales.

Figure A2.2 Sydney Electricity — cost recovery levels, 1992-93 to 1995-96



Source: Parry (1995).

The BIE's international benchmarking also shows there is room for productivity improvement which could lead to further cost reductions. In 1992, Australian state's total factor productivity levels for electricity were below world best practice, although this gap narrowed some what between 1989-90 and 1991-92. In 1992, productivity gaps relative to US investor owned utilities ranged from a low of 16.6 per cent for Queensland to a high of 33.4 per cent in Victoria (BIE 1994b).

Evidence concerning the reliability of electricity supply suggests that the average interruption time per customer was higher in Australia than overseas. But, there is evidence to suggest that this is improving. The BIE will be publishing an update on the international performance of the electricity industry in early 1996.

A2.2 Natural gas

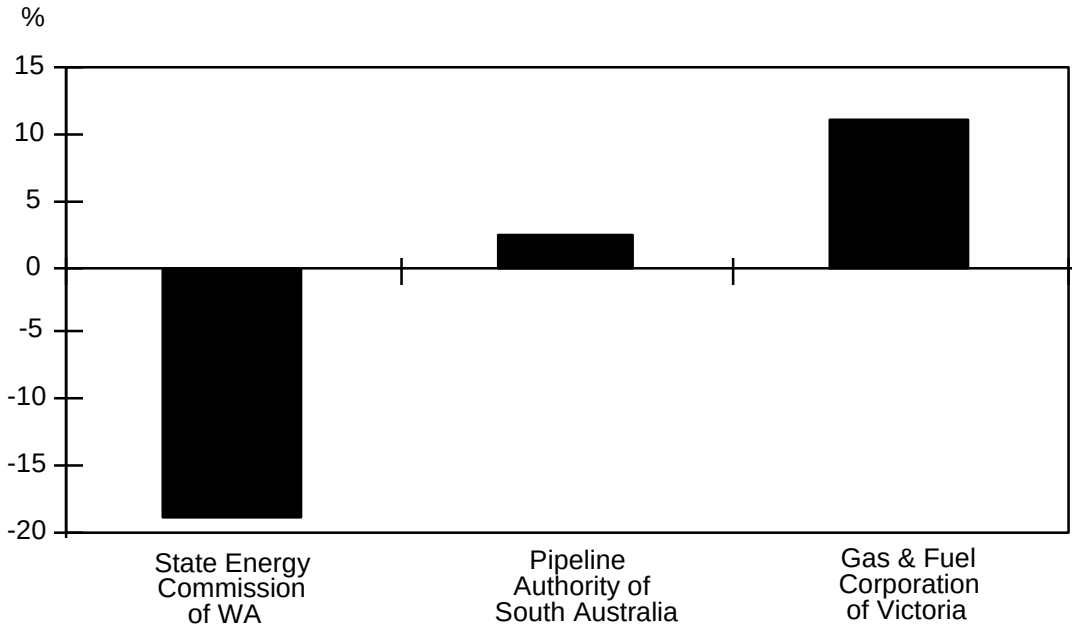
The gas industry in Australia, unlike most infrastructure industries is characterised by a relatively large amount of private sector participation, particularly in the production and transmission of gas. Of the GBEs involved in the gas industry, the Gas and Fuel Corporation of Victoria (GFCV) is the largest utility.

International comparisons of natural gas prices reveals that Australian industrial, commercial and residential prices of natural gas compare favourably to prices paid in most industrial countries. In 1992, the average industrial price of natural gas was lower in Australia than in Japan, Europe and New Zealand, but higher than in both the United States and Canada. Once differences in consumption per customer are taken

into account Australia's natural gas prices were comparable to those in North America (BIE 1994c).

In contrast to electricity prices, real gas prices in both Victoria and South Australia have increased in recent years. Over the period 1987-88 to 1993-94, real gas prices increased by around 11 per cent in Victoria and 2 per cent in South Australia (figure A2.3). In Western Australia, on the other hand, real gas prices have declined by around 19 per cent since 1987-88. The increase in Victorian gas prices has largely been a result of the renegotiation of major contracts. Victoria has, however, had the lowest gas prices in Australia for over 20 years. The BIE (1994c, p. 22) reports that Victoria's prices were around 50 per cent lower than those in Queensland and Western Australia.

Figure A2.3 Percentage change in real gas prices, 1987-88 to 1993-94

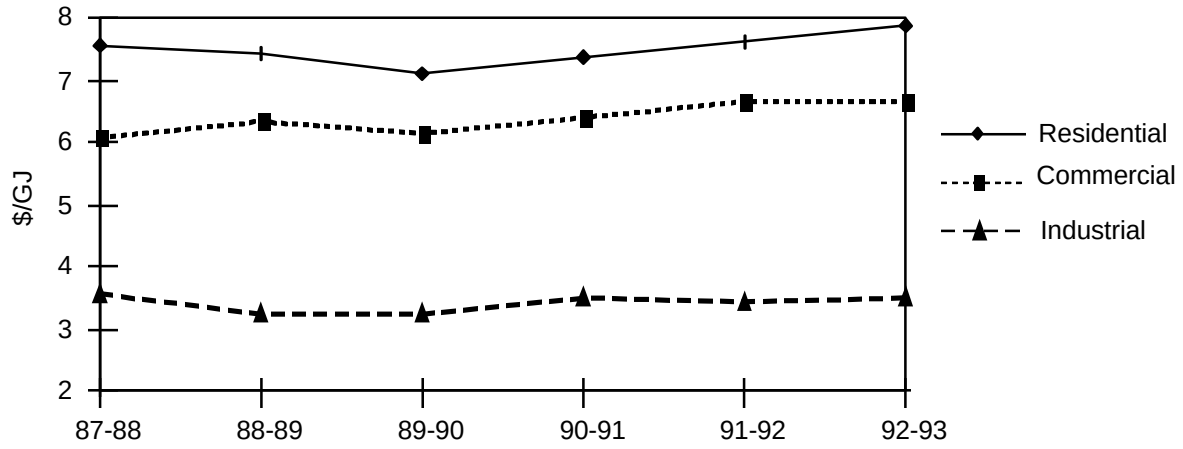


Source: SCNPMGTE (1994, 1995).

Some pricing reforms have also been applied to the gas industry in an attempt to reduce the cross-subsidisation between industrial users and residential and commercial users. For example, the GFCV has frozen tariffs for industrial users while increasing residential prices. But, according to the SCNPMGTE (1995, p. 42), significant cross-subsidies remain in the gas industry.

These pricing reforms are reflected in variations in price movements between customer classes. Figure A2.4 illustrates that while average Australian residential and commercial gas prices have increased (4 per cent and 9 per cent respectively), average industrial gas prices have declined by around 2 per cent over the period 1987-88 to 1992-93.

Figure A2.4 Average real gas prices by customer classes, 1987-88 to 1992-93



Note: Prices are in 1987-88 dollars. Average prices are a weighted average covering all states except Tasmania.
Source: AGA (1994).

Due to a lack of data, the BIE's international benchmarking of gas did not undertake a detailed analysis of quality of service indicators for the natural gas industry. However, the Bureau in discussions with a number of major industrial customers found that gas supply reliability was not a major issue. The future continuity of supply, was the key concern (BIE 1994c).

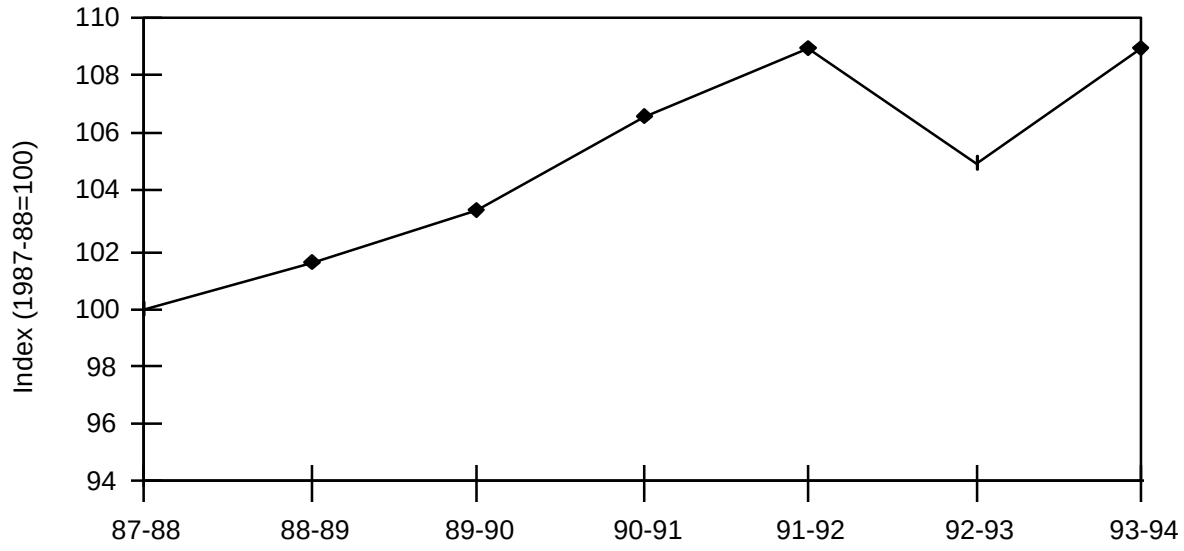
A2.3 Water

Pricing reforms in the water industry, including increasing reliance on user pays and increased emphasis on cost recovery, have resulted in real water prices in Australia increasing by around 9 per cent since 1987-88 (figure A2.5).

Water pricing reforms have also seen water utilities reducing cross subsidies between non-domestic and residential users. The adoption of user-pay principles has resulted in less reliance on property based charges which previously resulted in cross subsidies between small users of water with large property values to intensive residential and commercial users with low property values.

Irrigation services, which account for more than two-thirds of Australia's total water consumption, are still priced well below the full cost of provision. And, although water pricing has been a significant issue for providers of irrigation services, they are still a long way from recovering costs. According to SCNPMGTE (1995, p. 52), the low level of cost recovery for irrigation services has a significant impact on the profitability and return to assets of water authorities involved in irrigation.

Figure A2.5 Real water prices, 1987-88 to 1993-94



Source: SCNPMGTE (1994, 1995).

One indicator of service quality for water GTEs is compliance with water quality standards. According to the SCNPMGTE (1995, p. 57), compliance with water quality has generally been high throughout the period 1989-90 to 1993-94, averaging around 95 per cent.

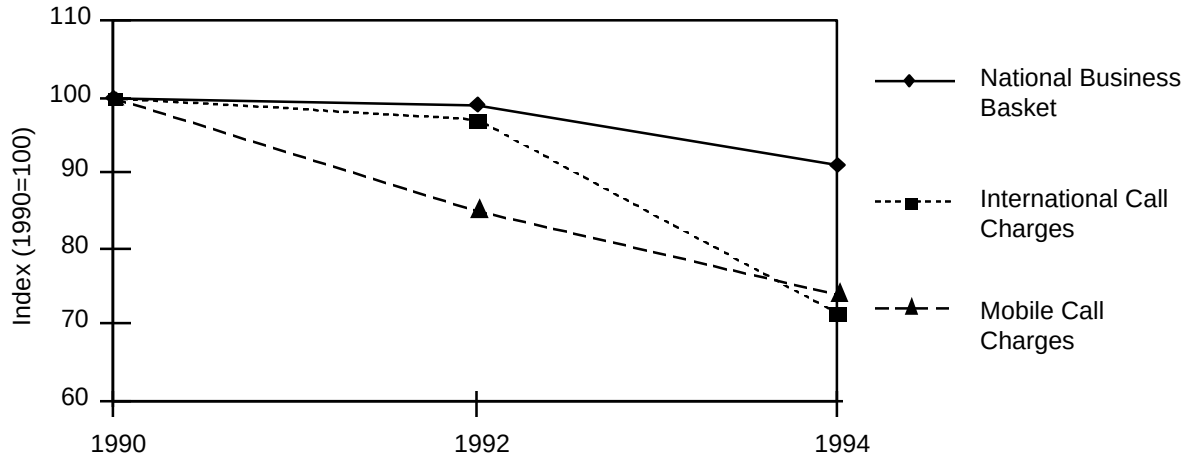
The BIE expects to publish its first international performance benchmarking report on the water and sewerage industry in late 1996.

A2.4 Telecommunications

Published telecommunications prices have fallen in real terms in Australia following the introduction of competition. Over the period 1990 to 1994, prices for a basket of national services for business users (including fixed charges, local and long distance calls) declined by around 9 per cent. Over the same period, international call charges in Australia declined by 28 per cent and mobile call charges declined by 26 per cent (figure A2.6). Putting together a composite basket of telecommunications services, the BIE (1995e) found that Australia ranked 11th out of the 24 OECD countries. This ranking had remained unchanged since 1989.

Although telecommunications prices have fallen in real terms, Telstra only managed to meet its 1993-94 price cap obligations by virtue of discounts and the allowed deferral of 1 per cent until next year (Austel 1994). According to the BTCE (1995b), Telstra's prices have not fallen any faster than in the period leading up to the introduction of competition. Prior to the introduction of competition price falls would have largely reflected changes in technology and productivity.

Figure A2.6 Average real telecommunications prices, 1990-1994



Source: BIE (1995e).

Although published telecommunications prices in Australia have declined in real terms, they have not declined as fast as our competitors' prices. Table A2.2 illustrates that while the basket of national services for business users and international calls have been declining in Australia, these declines have been less than the OECD average. Only on mobile call charges, have published prices in Australia fallen more than the OECD average (BIE 1995e). The BIE (1995e) observed that discounts off these published prices are an increasingly important element of pricing in Australia and other countries. Based on a constructed business basket, small business users had access to discounts of around 6.5 per cent of the published prices. Medium and large business users had access to larger discounts, of around 8 and 10 per cent of published prices, respectively. Businesses could also obtain greater volume discounts for specific services. Discounts of up to 25 per cent on voice communication charges were available through aggregators or resellers. BIE analysis suggests that while discounts in Australia appear to be among the highest in the OECD they are insufficient to alter our relative ranking.

Table A2.2 Comparison of changes in published real telecommunication prices, 1990 to 1994

Telecommunications category	*Australia* (%)	*OECD average* (%)
National business basket	-8.9	-15.3
International calls to OECD countries[a]	-28.4	-34.6
Mobile services basket	-26.3	-20.6

Note: [a] Peak rate 3 minutes international calls to OECD countries.
Source: BIE (1995e).

In terms of quality of service, the BIE (1995e) found some improvement in the reliability of the telecommunications network since the introduction of competition, but significant scope for improvement remained. In 1992-93, Australia's performance was below international best practice on such quality of service indicators as call completion rates and fault clearances.

Australian productivity in telecommunications, while improving, was low by international standards. Out of a sample of 11 comparable countries, Australia ranked last in terms of labour productivity and seventh in terms of capital productivity in 1992 (BIE 1995e p. xv). This suggests there is still considerable scope for further price reductions for both industry and domestic consumers.

A2.5 Waterfront

The performance of Australia's waterfront industry is crucial to the competitiveness of Australian businesses because the vast majority of Australia's international cargo moves through sea ports. Beyond this, a sizeable proportion of the domestic transport task (for intermediate and finished goods) involves the use of sea transport between Australian ports.

The extensive reliance on the waterfront means that the costs associated with any waterfront inefficiencies can be high. During the 1980s it became increasingly obvious that the waterfront was inhibiting the competitiveness of Australian firms. For example, the Task Force on Shore Based Shipping (Webber 1986) highlighted low productivity, delays and costs as being major problems. The BTCE (1989) estimated the costs of waterfront unreliability in 1988 ranged between $850 million and $1 000 million. The Australian waterfront has undergone a substantial program of reform since 1988. Reforms have affected stevedoring, towage, grain handling and port authorities. The following discussion relies extensively on the BIE's latest international benchmarking report on the waterfront (BIE 1995c).

Stevedoring productivity, as measured by crane rates, is generally used as an indicator of how performance has changed. Productivity improved between 1989 and 1992 and this in turn benefited port users through lower charges and improved service quality, for example, faster turnaround times. From mid 1991, crane rates (containers moved per crane hour) started to show real improvements, coinciding with the introduction of the enterprise agreements. The national average container rates increased from 12.8 teus per hour in 1989 to 20.1 teus per hour in September 1992. However, rather than witnessing continuing progress in waterfront productivity, the past two years saw some serious setbacks in crane rates.

From the September quarter 1993 to the December quarter 1994 crane rates fell at Melbourne, Sydney and Brisbane, but increased at Fremantle and Adelaide (figure A2.7). This volatility has continued into 1995 with improved performances

recorded at Sydney, Melbourne and Adelaide but falls in Brisbane and Fremantle. The overall five port average fell between September 1993 and December 1994, but improved in March 1995 quarter. This improvement in the five-port average was reversed in the June quarter when the teus per hour rate fell to 18.9. In that quarter set-backs occurred at Melbourne, Sydney, Brisbane, Adelaide and Fremantle (figure A2.7). Subsequent data indicates some improvement, with the five-port average increasing to 19.5 teus per hour. However, this rate remains below the rate achieved in September 1992.

According to the PSA (1994a), the real price of container stevedoring services fell by around 42 per cent over the seven years to 1993. The bulk of this reduction occurred throughout 1991 and 1992 with the implementation of the major elements of the waterfront reform process. But, not all of the price fall can be attributed to the reform process. Lower volumes through the recession and competition also placed pressure on stevedores' charges (BIE 1995c).

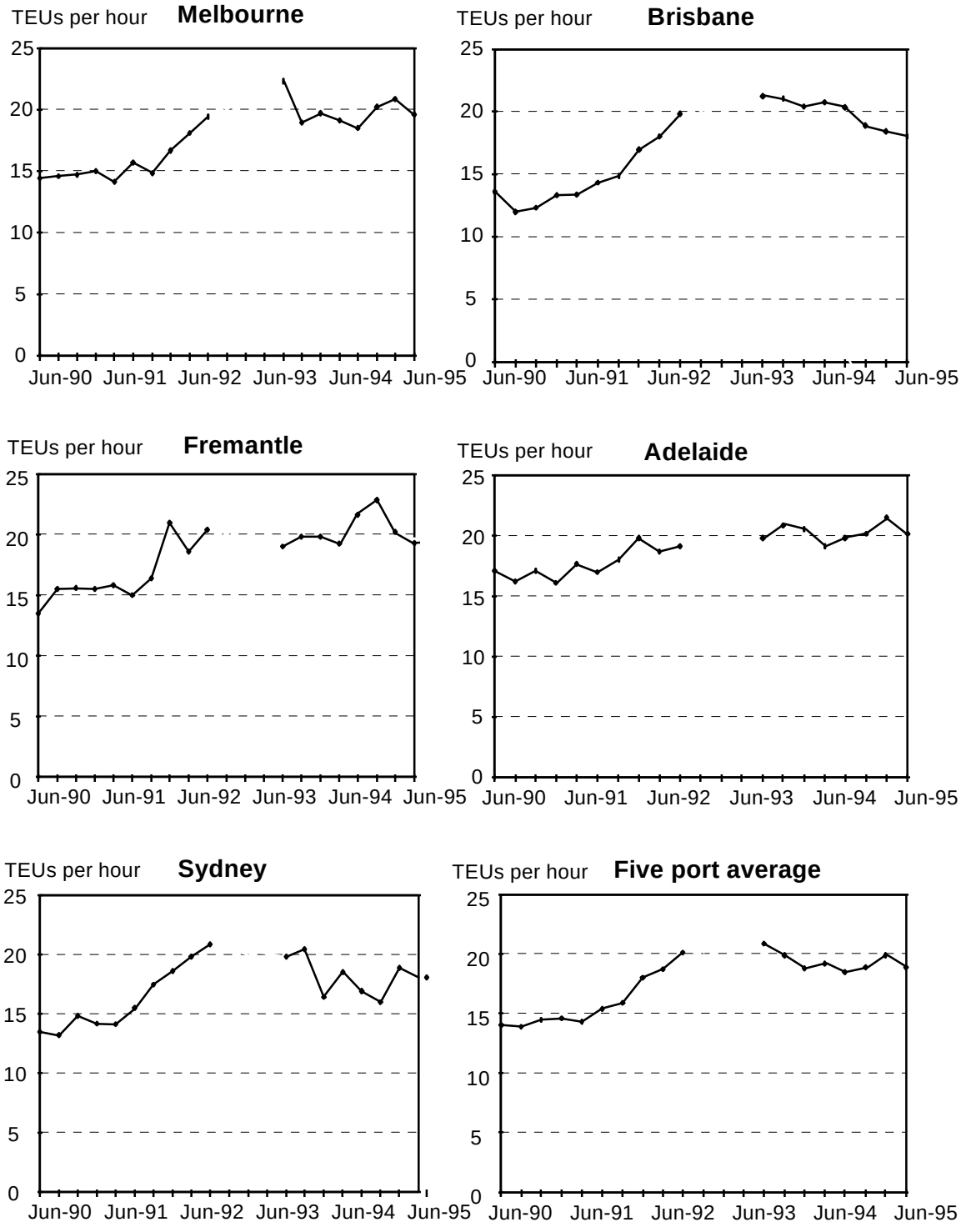
According to the PSA (1994b), *harbour towage charges* had generally not been reduced as waterfront reforms were implemented. The PSA found that towage reforms had significantly reduced crewing costs, but that these had been offset by other increases (e.g. fuel). The PSA stated that 'the impact of the reforms has been, at best, to restrain charges, although these have increased in some ports (PSA 1994b, p. 101).

Shippers have also benefited from lower *terminal handling charges*. Reductions in terminal handling charges were most marked for 40 foot containers, but declines in charges were not consistent across all lines or trades (PSA 1994c).

The performance of *port authorities* improved since the beginning of the reform process. This is reflected in improved financial performance, in terms of the operating sales margin and dividends. On average port authority charges fell, with the average index of real prices for port authority services declining by 14 per cent between 1989-90 and 1993-94 (SCNPMGTE 1995).

Despite these improvements in costs to users, an international comparison of Australia's waterfront charges has revealed that while waterfront charges for coal handling in Australia are among the lowest in the world, charges for containers are considerably higher than most ports in New Zealand, Asia and Europe. Relatively high terminal charges were the main reason for the high charges for containers, but these were compounded by relatively high port authority, pilot and towage charges. Australia's non-terminal waterfront charges for break bulk (non-containerised general) cargoes were also high by international standards, being substantially higher than those applying to ports in the southern United States, Mexico and Panama. Port authority and ancillary charges were the main cause of the differences in break bulk charges between the ports (BIE 1995c).

Figure A2.7 Crane rates[a] by major Australian ports, June 1990 to June 1995



Notes: Net rates measure the number of teus moved per net hour (the time the ship is at berth less time due to shift breaks or unforseen circumstances — eg bad weather and industrial disputes. Crane rate is the number of teus moved per crane per net hour. Neither the WIRA nor the BTCE monitored terminal performance between December 1992 and June 1993 hence the break in the series. The five port average is an average of Melbourne, Sydney, Brisbane, Fremantle and Adelaide.

Source: BIE (1995b).

While high costs are an important concern for liner shipping companies and their Australian customers, timeliness and reliability can be a more crucial issue for overall competitiveness. The containers moved by liner shippers tend to contain high value and time sensitive goods. Timeliness and reliability are also important for liner shipping companies as they operate according to fixed schedules.

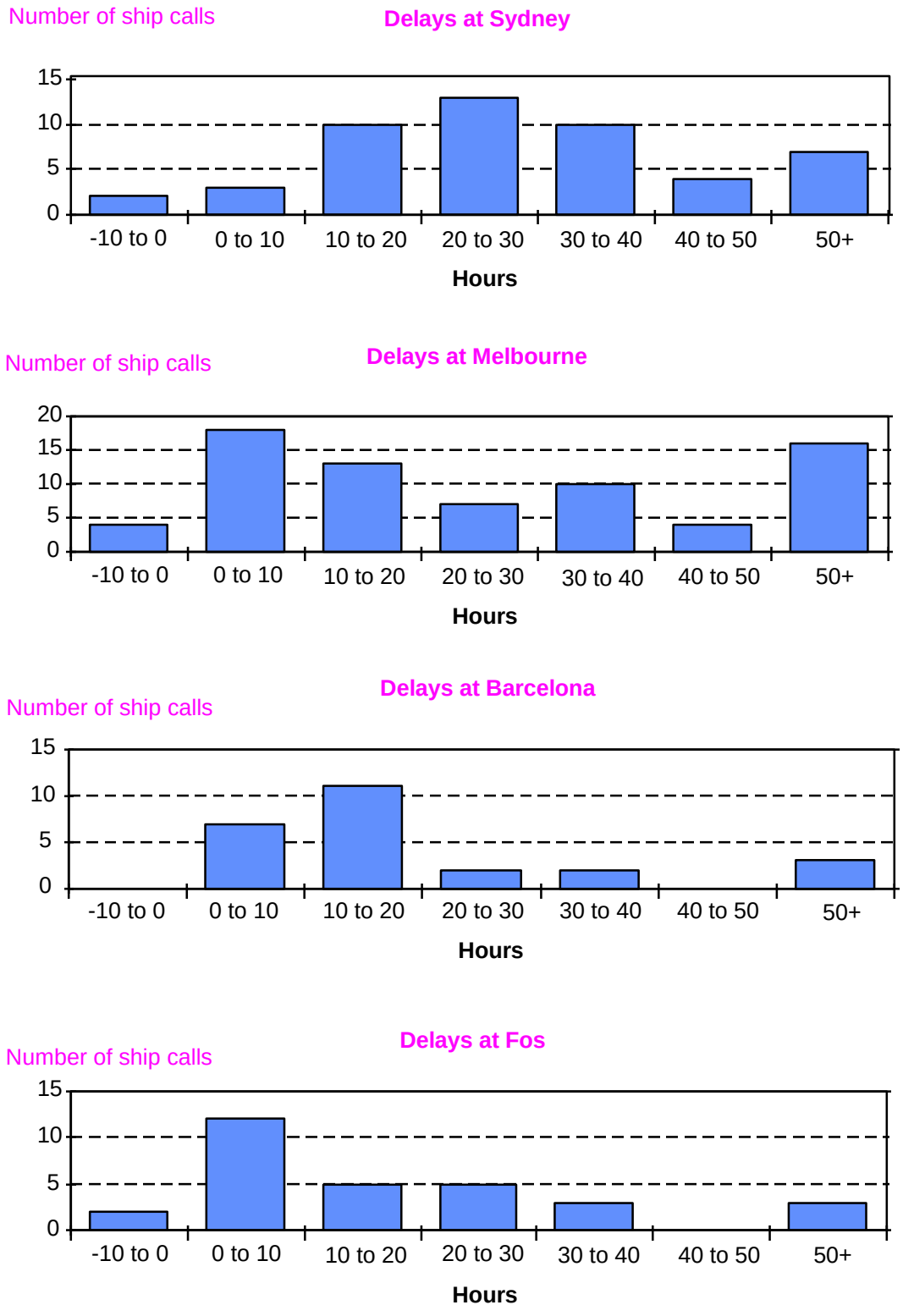
Reliability of port services can also be measured in terms of the time delays experienced by ships at each port. Average time delays, for example, can be estimated with reference to the average difference between the planned time in port and actual time in port for a vessel. While average delays provide a crude performance indicator, the duration of the delays is important when assessing the costs imposed on liner shipping activities and ultimately shippers. For instance, liner shippers delayed in a port for, say 10 hours, can generally make up this lost time during the voyage to the next port. However, if delays extend to, say 2 days, this potential to make up lost time is largely removed. In this instance, companies may be forced into the costly situation of by-passing subsequent ports. In the case of Sydney, for example, the overall performance of the port, has in the past, compounded the effect of poor terminal performance. In 1994, for instance, while Barcelona had the poorest terminal performance (ie actual production rates compared to planned production rates), Sydney recorded the highest average delays for P&O vessels. Average delays were also high at Melbourne (BIE 1995c).

Average delays, however, tend to hide the true costs associated with delays in some Australian ports. In Sydney and Melbourne, for example, the high average delays experienced by P&O in 1994 were due to a large proportion of vessels experiencing lengthy delays. For example, the most common delay, in Sydney — experienced by 25 per cent of P&O's ships — was around 1 day (20 to 30 hours). At Melbourne, the most common delay — experienced by 45 per cent of ships — was lower and was under 20 hours (figure A2.8).

Despite this, P&O's experience indicates Melbourne could be considered a more unreliable port. For instance, in 1994 30 per cent of P&O's vessels at Melbourne, as against 20 per cent at Sydney, experienced delays of over 40 hours. Such lengthy delays can be extremely costly for liner operators.

P&O's experience at the overseas ports is in some contrast to its Australian experience. Similar to Melbourne and Sydney, P&O's vessels experienced high average delays at Barcelona and Fos (15 to 25 hours). Like Melbourne, the majority of these delays were under 20 hours. Delays of this duration can usually be accommodated within schedules. In contrast to the Australian ports only 10 per cent of P&O's vessels at Barcelona and Fos experienced the more potentially costly delays in excess of 40 hours, in 1994.

Figure A2.8 Selected container terminals delays, 1994: P&O a case study



Source: BIE (1995c).

In terms of container productivity, the BIE (1995c) found that while most overseas ports were moving ahead, Australia had stepped backwards. This highlights the importance of implementing reforms that provide in-built incentives for continuous performance improvements. Productivity improvements need to be consistently maintained over long periods before they can be expected to be reflected in revised ship schedules and lower freight rates.

A2.6 Coastal shipping

Australia's coastal shipping industry provides vital transport services to a number of industries whose products are not readily amenable to long distance land transport alternatives. The competitiveness of some key Australian industries such as steel making and mineral processing is consequently importantly influenced by the performance of coastal shipping. Australia's large island land mass and relatively small and dispersed population also means that domestic users of transport services are generally more reliant on coastal shipping than in other countries.

In the 1970s and 1980s, coastal shipping lost a sizeable share of both container and non-bulk cargoes to land transport (wherever these alternatives were available) and those general cargo services remaining had a reputation for unreliability. Despite coastal shipping's natural advantage in the carriage of bulk cargoes, several reports criticised the industry for being high cost, inefficient and unreliable (see, for example, Crawford 1982, p. 4).

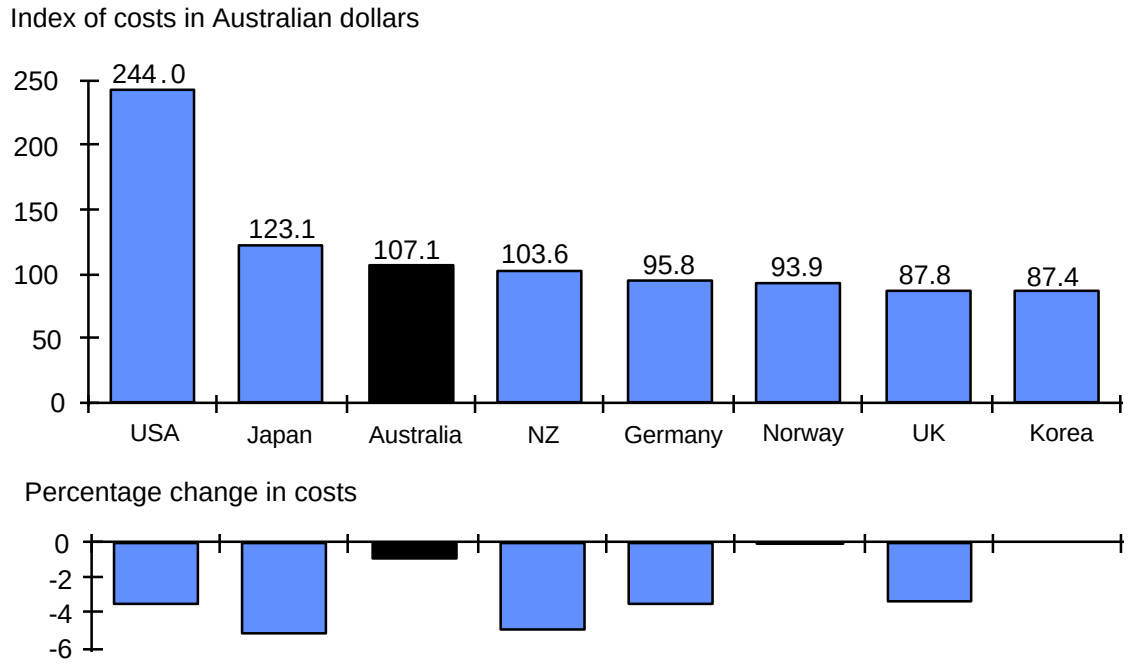
Reforms to the coastal shipping industry, designed to improve the efficiency and competitiveness of the industry, have seen some sizeable improvements in labour and vessel productivity and to a lesser extent freight rates in recent years. The Prices Surveillance Authority reported that 'reforms have been successful in providing lower cost structures for coastal ship operations' and 'shippers have also benefited with stable freight rates in 1991 and 1992 (constant in real terms) following significant savings in 1990' (PSA 1993).

Data provided by the PSA in 1995 indicates that real implicit freight rates for the Bass Strait trade increased marginally between 1991-92 and 1993-94 (ie by less than one per cent). The implicit freight rate for the Bass Strait trade in 1993-94 was 1.5 per cent lower than in 1986-87 (BIE 1995g).

Vessel costs are an important factor in in-house pricing for vertically integrated operators and are a good proxy for freight rates paid for independent users. The BIE has found that Australian vessel costs were higher than those for similar vessels registered in five of the seven overseas countries chosen for benchmarking (BIE 1995g). Only the United States and Japan had higher vessel costs (figure A2.9). The capital cost component for Australian vessels was the lowest observed. However, manning costs were higher than five of the seven countries benchmarked — the main

contributors being high leave and wage on-costs. Australian fuel costs were more expensive than all countries selected, this largely reflects the excise tax paid on fuel. Vessel costs in all countries fell between June 1992 and June 1994. However, the BIE observed that, with the exception of Norway, the decline in Australian vessel costs was less than the decline observed in the countries selected for benchmarking. As a consequence 'Australia's uncompetitive cost standing did not change despite the existence of a shipping reform process' (BIE 1995g p. xv).

Figure A2.9 Dry bulk vessel costs[a], selected countries, June 1994 and percentage change[b] on June 1992



Note: [a] Index Australia 1992 = 100. Size = 35 000 dwt. Vessel costs relate to the sailing segments of sea voyages and comprise capital, operating and voyage costs. **b** Percentage change not calculated for South Korea as it was not included in the set of selected countries in 1992.

Source: BIE (1995g).

A BIE survey of independent (i.e. not in-house) shippers indicated that both bulk and non-bulk users perceived a general trend of improvement in coastal shipping services between 1993 and 1994 (BIE 1995g). Shippers generally rated the level of service they received quite highly in 1994. Particularly, for the most important elements of service such as reliability of delivery time, care of goods and equipment suitability. However, both bulk and non-bulk shippers expressed concerns about freight rates being too high. Non-bulk survey respondents reported that more than 86 per cent of ships arrived on time, down from around 88 per cent in 1993. Similarly, bulk respondents reported that more than 85 per cent of ships arrived on time in 1994, down from 95 per cent recorded in 1993 (BIE 1995g).

The BIE (1995g) also found that for both bulk and non-bulk shippers, reliability of delivery time was the most important aspect of coastal shipping service. A measure of reliability in the industry is the ratio of ship days lost through industrial disputes to ship days available. The movement in this indicator between 1987 and 1994 shows that the reliability of the industry improved considerably in terms of a marked reduction in ship days lost due to crew disputes (table A2.3). There was, however, a sizeable deterioration in this indicator in 1994. The number of ship days lost through crew industrial disputes increased from 0.07 per cent in 1993 to 0.19 per cent in 1994 (BIE 1995g).

Table A2.3 Australian ship days lost due to crew disputes, 1987 to 1994

Year	*Ship days lost*	*Ship days available*	*% days lost*
1987	119	35 000	0.34
1988	72	33 480	0.22
1989	48	33 840	0.14
1990	28	33 480	0.08
1991	38	33 120	0.11
1992	50	32 400	0.15
1993	23	32 400	0.07
1994	63	32 400	0.19

Source: Information supplied by ASA, found in BIE (1995g).

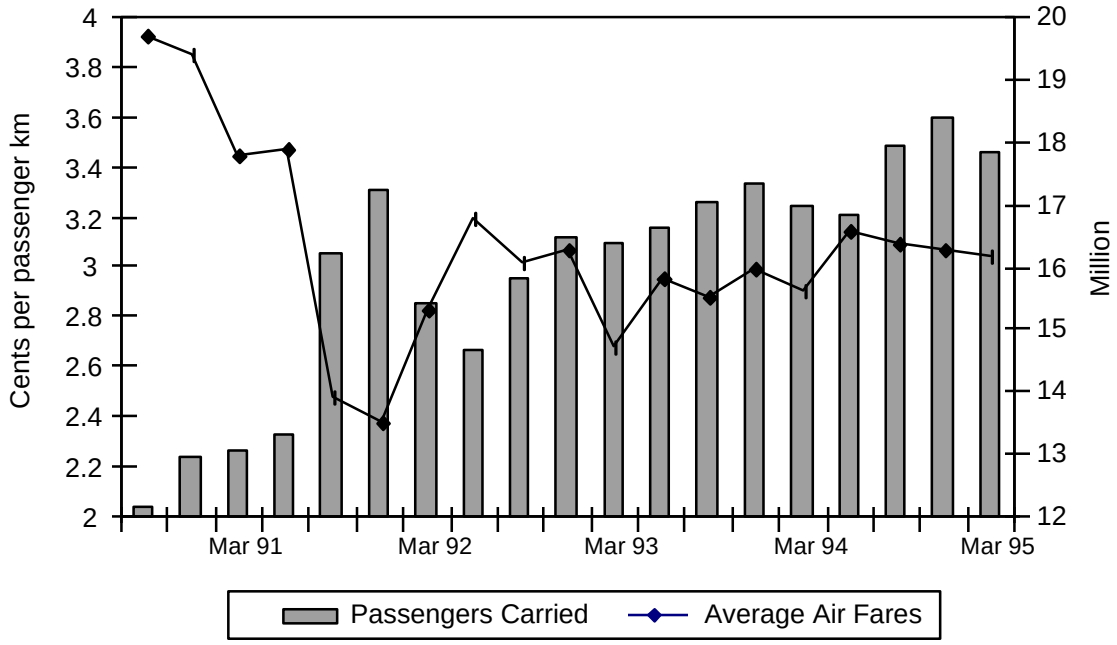
A2.7 Aviation

The deregulation of Australia's domestic aviation industry in 1990 was accompanied by a fall in average domestic air fares. As illustrated in figure A2.10, average fares in 1995, were around 26 per cent lower than before deregulation (PSA 1995). However, the downward movement in average fares obscures trends in different fare classes and routes. Economy, business and first class fares increased in real terms since September 1990, but average fares fell because of discounting and because an increasing proportion of passengers were able to take advantage of fare discounts (BIE 1994d).

The BIE (1994d) found that many private sector firms restructured their travel management to access discount fares, despite the often limiting conditions attached to such fares. Use of economy fares by business also increased.

As a result of lower average fares, demand for air travel increased since deregulation. The number of passengers carried by the major airlines in the March quarter 1995 was around 70 per cent higher than in the September quarter of 1990 (figure A2.10).

Figure A2.10 Average air fares and number of passengers carried, 1991 to 1995



Source: PSA (1995).

The percentage of domestic flights arriving and departing on time at capital city airports also improved since deregulation (table A2.4). In 1992, the percentage of flights which arrived/departed within 15 minutes of schedule (by international conventions this is considered to be 'on time') was substantially higher than in the two previous years.

Table A2.4 Percentage of flights arriving and departing on time, September quarters, 1990 to 1992

	Arrivals			*Departures*		
Airport	*1990*	*1991*	*1992*	*1990*	*1991*	*1992*
Adelaide	na	69	77	na	85	94
Brisbane	72	75	82	77	87	94
Melbourne	60	77	78	63	85	94
Perth	na	49	63	na	85	90
Sydney	75	82	84	79	83	91

Note: **na** not available.
Source: BTCE [1993, pp. 117-119] found in BIE (1994d).

There is some evidence to suggest, however, that the performance of this sector, in terms of some aspects of service quality, then regressed. Increased departure delays experienced at Sydney airport were an indication of this. While there is no official data covering this area, the on time performance of Kingsford Smith airport has been

affected by continuing problems with the introduction of new air traffic control software. Based on advice from the Commonwealth Department of Transport, Sydney airport's average aircraft movement rate, during busy hours, has increased from 54 movements per hour, prior to the commissioning of the parallel runway, to an average rate in October 1995 of around 60 movements per hour. While there is no direct relationship between movements per hour in busy periods and on-time performance, the increases in hourly capacity could lead to improvements in recorded on-time performance.

The BIE's (1994d) international comparisons of air fares reveals that Australia's air fares and freight rates were among the lowest in the world. Australia's domestic air fares were well below those levied on similar length routes than those in Japan and within Europe and North America. However, despite the quite sizeable price advantage which existed for the first, business and economy class fares, much of this advantage was eroded once economy discount fares were considered.

These findings also extended to Australia's international routes, although the picture was more complicated. On the shorter haul international routes (e.g. Sydney-Auckland), air fares to and from Australia were well below those experienced on comparable routes overseas. On medium haul routes (eg Melbourne-Singapore and Cairns-Tokyo), the economy fares tended to be above those charged on comparable routes overseas (such as London-New York and Amsterdam-New York). This may have been due to differences in the level of competition on these routes, as well as demand side factors. Over the longer haul routes, no distinct trend was apparent. For example, the Sydney-London fares were competitive with the London-Singapore fares, but the Sydney-Los Angeles fares were well above the Hong Kong-Los Angeles fares.

Freight rates on Australia's domestic routes were, in general, below the international average and well below those charged in Europe and from Japan. The freight rate comparisons revealed very competitive freight rates from Australia. Freight rates from Australia were consistently below those for cargo travelling to Australia over the same routes (BIE 1994d).

On service standards the BIE (1994d) found that Australia standards are consistent with many of the better performing airlines overseas. Areas where Qantas' and Ansett's performance are rated highly are safety, on-board comfort and in-cabin service.

A2.8 Rail

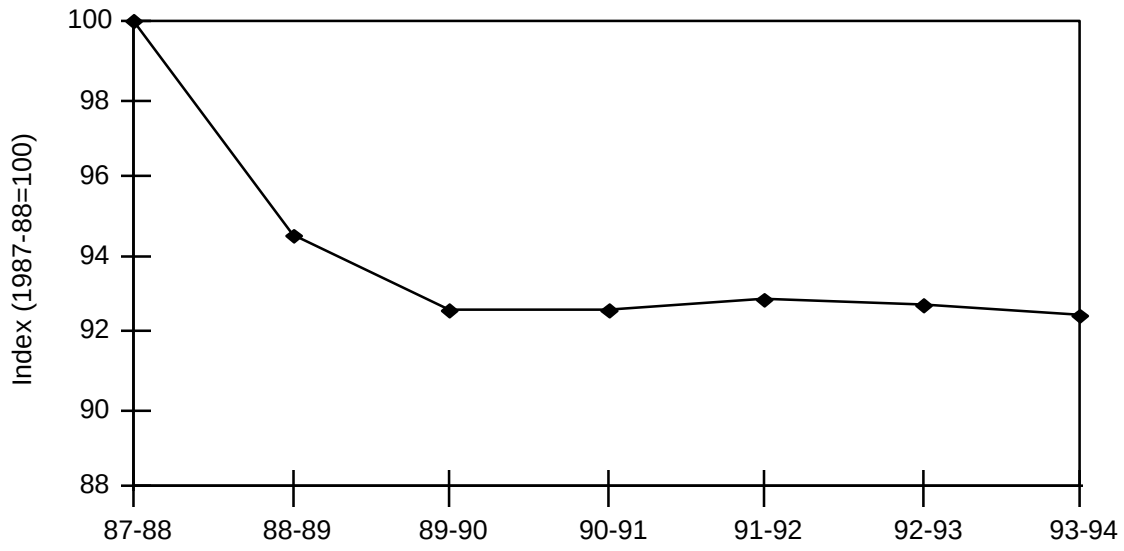
Rail transport makes up a significant proportion of the costs of some of Australia's largest exporting industries, including coal and grains. Inefficiencies within the rail industry therefore have the potential to significantly affect the competitiveness of key

Australian industries. The inefficient operation of railway services in Australia has been reflected in the large financial losses incurred by many of the rail authorities. Governments in the past have also frequently required rail authorities to fulfil government social policies which have resulted in pricing practices such as cross subsidisation. Reforms aimed at improving the performance of the rail industry have included: commercialisation, corporatisation, pricing reforms and moves towards increasing competition.

The reforms to the industry have seen average real prices for rail GTEs decline by around 7 per cent over the period 1987-88 to 1993-94 (figure A2.11). This decline, however, masks significant variation in price movements for freight and passenger rail services. Since 1989-90, rail freight prices have fallen by nearly 19 per cent while urban passenger fares increased by 20 per cent and non-urban passenger fares increased by 50 per cent (SCNPMGTE 1995). This differential, in part, reflects a reduction in the cross subsidies which are common in Australia's rail networks.

While rail freights are declining there is still substantial potential for further reductions. The BIE (1993) found that Australian rail freight rates were, with the exception of general freight, much higher than world best practice. For example, in 1991-92, NSW State Rail Authority and Queensland Rail had rail freight rates for coal haulage that were 22 and 38 per cent higher, respectively, than US rates for comparable haul lengths. Rail freight rates for general freight (comprising containers, steel, motor vehicles, paper products and other general merchandise) in Australia were close to best observed overseas rates in 1991-92.

Figure A2.11 Average real rail charges — all services, 1987-88 to 1993-94



Note: Average price index excludes National Rail Corporation.
Source: SCNPMGTE (1994, 1995).

The reliability of Australia's rail networks, whether measured by transit time, on-time arrival performance, or availability of goods to the customer at the time promised, is generally inferior to that of road transport (BIE 1993). While there was a slight improvement in the average timeliness of freight trains for some Australian systems over the period 1989-90 to 1993-94, there was some variation between systems. For example, in 1993-94 the timeliness of freight in Queensland, although improving marginally, was significantly below that in the other states (table A2.5).

Table A2.5 On-time running of freight trains[a], 1989-90 to 1993-94

System	*1989-90*	*1990-91*	*1991-92*	*1992-93*	*1993-94*
Queensland Railways	na	na	45	48	50
State Rail Authority of NSW	59	79	78	81	85
Westrail	na	65	72	83	70
Australian National Railways Commission	53	72	81	63	65
Public Transport Corporation of Victoria	89	92	96	89	78

Note: [a] Defined as percentage of trains arriving within 30 minutes of the scheduled arrival time. **na** Not available.
Source: SCNPMGTE (1994, 1995), BIE (1993).

A2.9 Road freight

Road freight in Australia is essentially a private enterprise service. Australian businesses appear to be generally well served by the road freight industry (BIE 1992). In relation to price, indicative survey data suggests that Australian road freight rates were broadly similar to those applying overseas in 1992 (BIE 1992).

Table A2.6 International comparison of road freight timeliness, reliability, loss and damage rates, 1992

Country	*On-time pick-up* (%)	*On-time delivery* (%)	*Loss and damage* (%)
Australia:			
Operator survey	94	96	0.4
User survey	95	96	0.6
United States[a]	94	97	0.9
Canada[a]	96	96	0.4
United Kingdom[a]	na	92	0.4
New Zealand[a]	na	85	1.6

Note: [a] Data for overseas countries based on operator survey information. **na** Not available.
Source: BIE 1992.

Likewise, in terms of on-time delivery relative to promised time, Australian road freight services were on a par with the United States, Canada and the United Kingdom. On incidence of lost and damaged freight, Australia's performance was superior to that in the United States and equivalent to that in Canada and the United Kingdom in 1992 (table A2.6).

A2.10 Concluding comments

In the same way as the nature and pace of infrastructure reform has varied between industries, so has the impact of reform varied between individual GBEs. In some instances, the reform process has been successful in reducing prices and improving quality of infrastructure services. Electricity and telecommunications fall into this category. In other cases, for example water, infrastructure prices have increased, reflecting the reform process and the removal of non-commercial cross subsidies. In other instances, the impact of the reform process, particularly with respect to service quality, has been positive but appears to be short lived, with quality improving for a short time before backsliding. Some areas of the waterfront fall into this category.

Even in those infrastructure industries which might be considered as reform successes there is no room for complacency. International benchmarking undertaken by the BIE suggests that much more adjustment is needed before Australia's infrastructure can be said to be operating at world best practice. Even when this goal is ultimately achieved, incentives must be in place to ensure that the momentum continues — the BIE's benchmarking work starkly illustrates that while we are improving, so is the rest of the world.

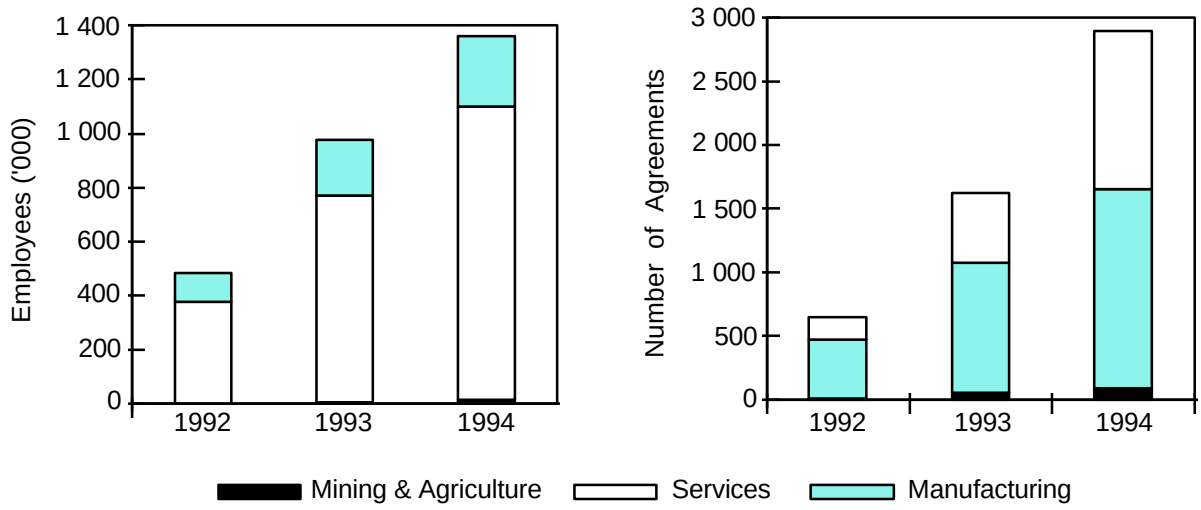
Appendix 3 Enterprise agreements in practice

This appendix provides a broad overview of changes in the incidence of enterprise agreements since October 1991. It also summarises the type of approaches taken by some parties to enterprise agreements in seeking to improve workplace productivity.

A3.1 Growth in the number of enterprise agreements

The number of federal enterprise agreements has grown strongly since the AIRC introduced formalised enterprise bargaining in October 1991 (figure A3.1 and table A3.1). By November 1992 (the first year of bargaining) the AIRC had ratified 647 agreements. In November 1994 the number of ratified agreements had increased to about 2 900. Although this is a cumulative total and includes an unknown number of replacement agreements, the data suggest a substantial increase. This take up was largely facilitated by the *Industrial Relations Amendment Act 1992* and, subsequently, by the *Industrial Relations Reform Act 1993*. The accumulated number of ratified federal agreements has continued to accelerate.

Figure A3.1 Federal enterprise agreements ratified since October 1991, employee and sector coverage[a]



Note: [a] Cumulative number of agreements ratified by end of November of each year.
Source: DIR (1995b).

As at 6 October 1995, an estimated 5865 federal agreements had been formalised since October 1991 (DIR 1995b). The majority of new agreements came from unionised workplaces (DIR 1995a). Thus, the extension of formal enterprise bargaining, through enterprise flexibility agreements, to workplaces with little or no union coverage — one of the central features of the 1993 Reform Act — had little effect in the first months of operation. While the number of flexibility agreements is still small, there has been a steady increase in their number — with 13 approved in the December quarter 1994, 21 in the March quarter 1995, 26 in the June quarter 1995 and 37 in the September quarter 1995 (DIR 1995b).

DIR (1995a) suggests that the slow spread of formal agreements in non-unionised workplaces may reflect a number of factors including lack of experience in bargaining. The department also drew attention to a lower incidence of any formal bargaining in these workplaces. However, other factors are also relevant. These include the importance of informal agreements for this sector and the complexities and uncertainties associated with participating in the formal bargaining process.

Initially, most federal agreements occurred in the manufacturing sector but more recently they have spread to the services sector (table A3.1). In 1992, 72 per cent of all federal agreements were in manufacturing (particularly metals related industries which accounted for 62 per cent)[1] but the proportion of manufacturing agreements fell to 54 per cent in November 1994.

Over the same period, agreements in the services sector grew from 27 per cent of the total to 43 per cent. A further breakdown of the service sector agreement approved by November 1994 shows that 21 per cent of all agreements are in infrastructure industries (electricity, gas and water, construction, transport and storage, and communication), 6 per cent are in public administration and defence. Business, community and personal services account for 16 per cent (DIR 1995b). Service industries such as wholesale and retail trade, education, health and community services tend to have a lower proportion of agreements than other industries in the services sector (DIR 1995b). This may be due to a high proportion of these workers being covered by state awards. Other factors may also contribute to these differences in coverage. These include inter-industry differences in workplace size and employer and union strategies. In the mining and agriculture sector, federal agreements remain few — in 1994 they represented just 3 per cent of the total. DIR (1995b) has advised the BIE that the former Coal Industry Tribunal approved 43 site agreements, covering some 12 500 employees, which presently are not included in their statistics.

[1] The predominance of agreements in the metals related industries reflected the influence of the metals workplace bargaining framework agreement which was negotiated before the October 1991 national wage case decision. DIR (1993b, p. 6) point out that manufacturing sector agreements have spread beyond these metal related industries and agreements have been ratified throughout the sector.

Table A3.1 Federal enterprise agreements, 1992 to 1994[a]

	1992	*1993*	*1994*	1995
All AIRC ratified federal agreements				
Number of formalised agreements	647	1 624	2 886	5 865
Number of employees[b]	477 000	983 000	1 360 000	na
Employees as a proportion of employees under federal awards (%)[b]	24	49	57	na
Employees covered as a proportion of all Australian employees (%)[b]	7	15	21	na
Average annual wage increases for current agreements[c]				
- per agreement (%)	8.9	5.0	4.7	na
- per employee (%)	5.7	3.3	3.5	na
Private Sector				
Number of formalised agreements	566	1 351	2 373	na
Number of employees[b]	222 000	389 000	638 000	na
Proportion of private sector employees under federal awards (%)[b]	18	32	44	na
Public Sector				
Number of formalised agreements	81	273	513	na
Number of employees[b]	255 000	594 000	726 000	na
Proportion of public sector employees under federal awards (%)[b]	32	75	77	na
Formal duration of agreements (%)				
Less than 12 months	59	41	32	na
1 year but less than 2 years	30	39	46	na
2 years and longer	11	19	22	na
Median duration (months)	9.5	18	18	na

Notes: [a] Cumulative number of agreements — including replacement agreements — as at end November of each year except 1995 where data reports cumulative number of agreements as at 6 October. [b] Employee coverage **net** of replacement agreements, as estimated by DIR. DIR has indicated that a review it is undertaking of employee estimates may lead to some variation to the numbers reported. However, DIR believes the variations will not affect the trends shown in this table. [c] Excluding bonuses, performance pay, gain sharing and share acquisition. The relatively high wage increases for 1992 reflect the large number of short term metals agreements at that time and the relatively few agreements in the service sector — where wage increases have tended to be lower. **na** = Not available.

Source: DIR (1995b).

The government has set a target of 80 per cent of employees in the federal jurisdiction in direct bargains by the end of 1996 (Keating 1994a). At the end of 1994, an estimated 57 per cent of all employees covered by federal awards had been party to an enterprise agreement, a significant increase since 1992, when there was only 24 per cent coverage (table A3.1). Informal bargaining agreements, that is agreements not ratified by the AIRC, are also important in the federal system. 'At the end of 1994 approximately seven in ten workplaces in the federal system with ten or more employees were covered by some form of direct bargain' (DIR 1995a, p.20).

The duration of agreements also varies substantially but has tended to increase since 1992. The predominance of short term agreements in 1992 reflects the high incidence of agreements (32 per cent of total 1992 agreements) made pursuant to the metal industry framework agreement — all 235 or so metals agreements made under the framework expired on 1 January 1993.

The number of employees covered by federal agreements has more than doubled since 1992, increasing from about 477 000 to just under 1.4 million in November 1994 (figure A3.1). DIR (1995b) reports that the number of employees had increased to 1.46 million by the end of 1994.[2] Although the manufacturing sector accounts for just over half of all enterprise agreements at the federal level, manufacturing employees account for about 20 per cent of all employees covered by federal enterprise agreements. Service industry employees account for about 80 per cent of all employees covered by federal agreements (reflecting the service sector's high share of the total labour force).

Enterprise agreement coverage of public sector employees has outpaced that achieved in the private sector (table A3.1). At the end of November 1994 there were 2 373 private sector agreements ratified by the AIRC, covering an estimated 44 per cent (or 638 000 employees) of the private workforce in the federal jurisdiction. By contrast, the equivalent public sector coverage of about 77 per cent (726 000 employees) came from just 513 federal enterprise agreements.

Despite the growth in federal employee coverage, the agreements to date cover only about 21 per cent of the total Australian workforce. This reflects the large proportion of employees who are either under state awards or have no award coverage at all.

In the states, progress with enterprise agreement coverage has been slower. Data supplied to the BIE indicates that in any one state less than 30 per cent of employees covered by state awards have enterprise agreements.[3] Coverage ranges from 29 cent in New South Wales and Queensland to 5 per cent of employees in Tasmania (DIR 1995b).[4]

A3.2 The underlying nature of enterprise agreements

In general, the quality of agreements is more important than their quantity, however, data on the productivity gains achieved through enterprise agreements is relatively scant.

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2 These estimates of employee coverage, should however, be considered as upper limits because there may be an element of double counting associated with agreements which have been subsequently replaced with another agreement.

3 DIR could not provide coverage estimates for Victorian state award employees.

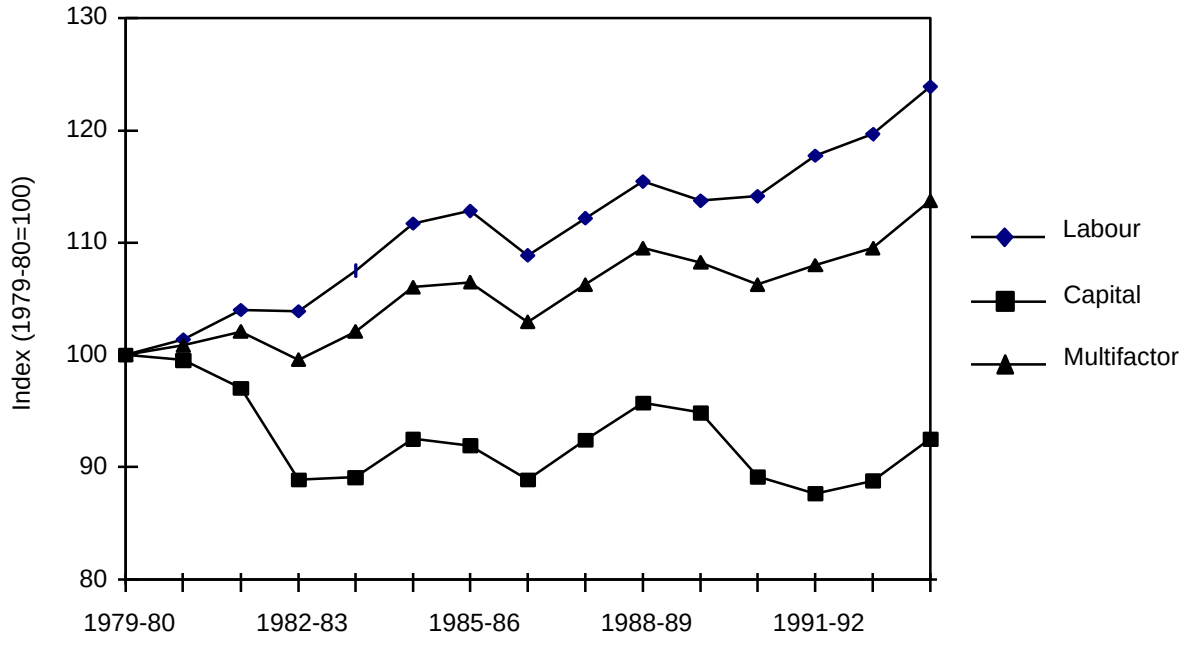
4 Although employee coverage data for a particular category of agreements in Tasmania are unavailable.

Some indication of productivity impacts can be gleaned to the extent that the wage increases achieved reflect expected or actual productivity increases during the term of agreement. Data on agreements current at November 1994 indicates they granted average annual wage increases of around 3.5 per cent[5] (table A3.1). The manufacturing, mining and agriculture sectors achieved higher increases than the services sector (DIR 1995b). DIR (1995a) also found that wage increases were an important benefit to employees for agreements ratified under the Industrial Relations Reform Act (Part VIB agreements). During the first eight months of Part VIB's operation the average annual wage increase per agreement was 4.8 per cent. The average annual wage increase per employee was 4.1 per cent, with the increase tending to be slightly higher in the private sector than in the public sector.

National non-farm productivity has increased in recent years (figure A3.2). However, Ergas and Wright (1994) consider there is little evidence of a significant increase in the trend rate of productivity growth. They suggest that:

> The mid 1980s productivity slowdown was probably influenced by the extended period of wage moderation, which reduced capital labour substitution. However, the path which succeeded it cannot at this stage be said to be above that of the past (Ergas and Wright 1994, p. 52).

Figure A3.2 Australian non-farm market sector productivity trends[a], 1979-80 to 1993-94



Note: [a] The indices exclude the following industries: agriculture; government administration and defence; finance and insurance; property and business services; education; health and community services; and part of personal and other services.

Source: ABS (1995g).

5 Excluding bonuses, performance pay, gain sharing and share acquisition.

Ergas and Wright hypothesise that this result may be because the economy is still adjusting to the microeconomic reform process. They suggest that change is more likely to show up in aggregates, such as national productivity growth, at sometime in the future. For this reason they suggest that micro-level studies, that is studies at the firm and industry level are a more realistic means of identifying the extent of change at this point in time.

A review of the first 1 000 enterprise agreements ratified by the AIRC (up to July 1993) showed companies had implemented a range of productivity enhancing measures relating to re-organisation of work, enhanced flexibility in the use of labour and changes to other aspects of employment, many of them inter-related (box A3.1). This trend has continued, DIR (1995a) indicates that the 1 360 agreements formalised in 1994 under the Reform Act provisions covered a wide range of changes in the conditions of employment (table A3.2). Nearly 70 per cent of these agreements included changes to the hours of work. For example, working longer hours during peak periods and shorter hours during off-peak periods and the introduction of continuous shifts over seven days.

Table A3.2 Part VIB 1994 agreements, employment conditions

Conditions covered	*Proportion of agreements*
	(per cent)
• Work organisation	35
• Use of capital	10
• Hours of work	68
• Overtime	37
• Shift penalties	11
• Public holidays	16
• Contract of employment	35
• Annualised salary	4
• Method of payment	29
• Long service leave	11
• Sick leave	25
• Family leave	17
• Annual leave loading	16
• Occupational health and safety	39
• Equity provisions	17
• Termination, change and redundancy	54
• Training and skill formation	67
• Performance indicators	32

Source DIR (1995a)

Box A3.1 Workplace bargaining — evidence from the first 1 000 agreements

The first 1 000 enterprise agreements ratified by the AIRC highlights the variety of approaches taken by individual enterprises to increase productivity at the firm level(DIR 1993a). The types of measures used in these agreements can be loosely grouped into four broad categories. The following list gives examples of measures in each category.

Work organisation

- multi-skilling and the reduction of demarcation barriers;
- introduction of team work;
- introduction of consultative processes at the work place;
- introduction of new production processes such as Total Quality Control;
- introduction of continuous improvement and best practice programs;
- organisational restructuring and broad banding; and
- introduction of performance indicators.

Conditions of employment

- changes to hours of work provisions;
- changes to employment contract (particularly for casual, part-time and contract labour);
- rationalisation of penalty rates (particularly annualised salary and overtime); and
- changes to leave provisions (particularly sick leave and family leave provisions).

Working environment

- consultation and communication;
- equality of opportunity;
- occupational health and safety; and
- improving absenteeism.

Training and skill formation

- introduction of new classification structures based on competence or skill;
- introduction of skills related career paths;
- linkage of remuneration to skills acquired/used;
- recognition of prior learning;
- portability of skills;
- provision and delivery of appropriate training; and
- introduction or increased use of multi-skilling and cross skilling.

Surveys conducted by DIR in December 1992 and July 1993 suggest the pace of change at the workplace has increased since 1990 (DIR 1994).[6] The most common

[6] These findings come from two DIR surveys which have sample bias. The 'workplace survey' was of a sub-sample from AWIRS (1991) of workplaces with 20 or more employees in all industries except agriculture and defence, covering the 12 months to December 1992. The 'enterprise survey' sampled two business registers, one private and one public, for firms with 100 or more employees.

changes reported were the multi-skilling of employees and the introduction of new technology. In addition, DIR suggested that, over the survey period 'the formal bargaining framework determined by the tribunals and legislation was of only minor significance in explaining bargaining patterns at the workplace' (DIR 1994, p. 83). Their survey results highlighted the importance of informal bargaining — both written (but not registered with industrial tribunals) and verbal — in supplementing the formal system. Bargaining had positive impacts on productivity and output, and in only a few cases did it result in industrial action.

A more recent survey conducted by the Department of Industrial Relations in November 1994 suggests that enterprise agreements may be contributing to increases in productivity (DIR 1995a). Managers at workplaces with agreements were more likely to perceive an increase in productivity during the previous twelve months than managers in workplaces with no recent workplace agreements. On the basis of managers' perceptions, nearly 80 per cent of workplaces with either a formal or unregistered agreement experienced an increase in productivity. This compared to perceived productivity increases in 56 per cent of workplaces with no recent agreement (DIR 1995a). There was relatively little difference in productivity perceptions between workplaces with different forms of agreement. However, marginally more managers in workplaces with unregistered (informal) agreements perceived an increase in productivity. Also, managers in workplaces with formal state agreements were less likely to perceive a productivity increase than managers with other forms of agreement.

The case studies of firms and industries being conducted by the BIE as part of the *Monitoring Micro Reform* project should provide further insights into productivity changes at the micro-level (see chapter 8).

Appendix 4 Economy-wide impacts of microeconomic reform

The process of microeconomic reform is aimed at improving the way in which the economy uses its productive resources. Whilst the benefits of the reform process are expected to be large, the process is not costless. Such costs are often more visible than the benefits because they tend to be concentrated among relatively small groups in the community whereas the gains tend to be far more widely dispersed. Since the losers from change tend to be more concentrated and cohesive than those who gain, they are usually far more vocal and there is a danger that the reform process may be disrupted. General equilibrium modelling of reforms has helped governments, industry and the general community see the broader economic picture.

A broad overview of the results of a number of microeconomic reform modelling studies is presented in section A4.1. This section also provides an indication of the potential benefits to the economy as a whole and assists in identifying the industries most likely to grow or decline as a result of the microeconomic reform program. In section A4.2 an examination is made of the factors that help to explain differences in the gains from microeconomic reform reported in these studies. Section A4.3 discusses some of the limitations of the general equilibrium modelling approach. A brief summary is presented in section A4.4.

A4.1 General equilibrium models

Studies that have estimated the economy-wide impacts of microeconomic reform have used various general equilibrium models, including versions of the ORANI and Murphy models of the Australian economy. As the microeconomic reform agenda developed and evolved, so too has the detail and coverage of reforms included in various model scenarios (see table A4.1).

In the discussion that follows we will examine some key studies published by the Industry Commission, the Bureau of Industry Economics, the Economic Planning and Advisory Council, and the Business Council of Australia. For each of these studies an examination is made of the impact of microeconomic reform on macroeconomic aggregates such as GDP, as well as the likely output effects at a sectoral and industry level. While the magnitude of these model results tend to vary, overall they all show the impact of the reform process to be positive.

Table A4.1 Microeconomic reforms assessed in different studies

	IC '90	*BIE '90*	*EPAC '94*	*BCA '94*	*IC '95*
Model	ORANI	ORANI-F	AEM-CGE	Murphy	HILORANI
Starting point[a]	1988-89	1988-89	1994	1994	1994
Number of industries/sectors	112	112	25	12	128
Nature of model run	(Static)	(Dynamic)	(Static)	(Dynamic)	(Static)
Reforms covered					
Transport				✓	
water					
– domestic	✓	✓	✓		✓
– international	✓	✓	✓		✓
bulk commodity handling	✓	✓			✓
rail	✓	✓	✓		✓
aviation					
– domestic	✓	✓			
– international	✓	✓	✓		
road	✓	✓	✓		✓
Communications				✓	
post	✓	✓	✓		✓
telecommunications	✓	✓			✓
Utilities					
electricity	✓	✓	✓	✓	✓ **b**
water	✓	✓	✓	✓	✓
Industry assistance					
rural	✓	✓	✓		
rural — statutory marketing arrangements					✓
manufacturing	✓	✓	✓		
investment incentives		✓			
Government activities					
government services					
– level				✓	✓
– efficiency			✓	✓	✓
– contracting out (competitive tendering)	✓			✓	✓
– indirect tax mix				✓	✓
Induced improvements					
productivity					
– manufacturing		✓	✓	✓	
– services		✓	✓		
reduced unemployment			✓	✓	✓ **c**
Unincorporated enterprises					
business services (legal profession)					✓
health (dentists, medical profession, optometrists)					✓
Anti-competitive legislation					
building regulations					✓
building approvals					✓
removal of monopoly provision of services					✓
self-regulation					✓

Note: [a] The BIE baseline includes the planned program of tariff reforms, while the reform scenario includes removing tariffs altogether. The EPAC base end-point excludes announced but unrealised tariff reductions. [b] Includes gains prior to 1994. [c] Reported in a separate modelling exercise rather than in the main body of projected gains.

Sources: IC (1990), BIE (1990), Filmer and Dao (EPAC 1994 in this table), BCA (1994) and IC (1995b).

Industry Commission 1990 — ORANI model

The IAC used the ORANI model to analyse various reforms during the mid-1980s. An early study examined the economy-wide effects of reduced protection in the textile, clothing and footwear industries (IAC 1986). Later, the IAC examined a range of microeconomic reforms to the transport sector in 1989. The IAC drew on this work, other studies of the impact of reforms to industry assistance and its inquiry into government (non-tax) charges (IAC 1989) in a study published in its 1988-89 Annual Report (IAC 1989b).[1]

The IC subsequently revised these projections, extending the range of reforms, in their 1989-90 Annual Report (IC 1990). The analysis covered reforms to domestic water, rail, air and road transport, international liner shipping and aviation, grain storage and handling, post and telecommunications, electricity supply, water and sewerage, contracting out by governments and removal of rural and manufacturing assistance. As shown in table A4.2, the estimates indicated that in the longer term (about 10 years) microeconomic reform would produce large gains in GDP, real consumption, investment and exports. The IC summarised the gains as follows:

> The results suggest longer term annual gains in real GDP of 6.5 per cent, equivalent to just over $22 billion 1988-89 dollars. Of this about $14 billion accrues in terms of higher consumption expenditure. This is equivalent to about $2 300 a household. The reforms are estimated to generate an extra 53 000 jobs (IC 1990, p. 30).

Whilst gains were reported for all sectors of the economy, the mining sector, with an estimated 32.6 per cent increase in sectoral output was seen as capturing by far the largest benefit from the reforms covered in the analysis. Of the 112 industries involved in the analysis only the textiles, clothing and footwear, motor vehicle, miscellaneous manufacturing and international aviation industries suffered significant long-term declines. The IC attributed these declines largely to the impact of reductions in manufacturing assistance and increased foreign competition.

Bureau of Industry Economics 1990 – ORANI-F model

To assist the Australian Manufacturing Council in its deliberations on the future direction of industry policy in Australia the BIE also studied the general equilibrium effects of microeconomic reforms. In contrast to the IC analysis, which reported the longer run annual gains from reform within a notional 10 year time horizon, the BIE (1990) made estimates of the impact of reforms over a seven year period — 1988-89 to 1994-95.

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[1] This study projected the gains from microeconomic reform to result in real GDP gains of almost 5 per cent or $16 billion in 1988-89 dollars. With real consumption gains equivalent to around $1 600 per household and employment gains equal to approximately 35 000 extra jobs.

Table A4.2 Projected effects of microeconomic reforms [a]

	IC '90	BIE[b] *'90*	*EPAC*[c] *'94*	*BCA '94*	*IC '95*
Time horizon of projections	Long run (10+ yrs)	Medium run (7 yrs)	Long run (10+ yrs)	Long run (20+ yrs)	Long run (10+ yrs)
Model	*ORANI*	*ORANI-F*	*AEM-CGE*	*Murphy)*	*HILORANI*
Macroeconomic aggregates					
Real GDP	6.5	9.5	12.7	20.5	5.5
Real consumption	5.4	0.3	14.4	na	3.4
Export volume growth	17.6	11.7	na	na	15.4
Import volume growth	11.6	11.2	na	na	1.2
Aggregate capital stock	7.2	7.5	na	na	5.7
Sectoral changes					
Output					
Agriculture	2.8	6.8	12.3 [d]	22.0 [d]	4.4
Mining	32.6	22.4	12.2 [d]	35.5 [d]	18.5
Manufacturing	2.7	15.1	13.6 [d]	29.0 [d]	5.4
Services	4.4	8.8	12.5 [d]	16.6 [d]	3.4

Notes: [a] All results are expressed as percentage changes. Each column compares a reform scenario with a base scenario at some point in the future. [b] The BIE analysis examined a number of reform and macroeconomic scenarios. The scenario reported here compares a level playing field reform agenda to a baseline scenario that includes planned reforms as at 1988-89, but no further reforms. [c] This compares the estimates of a conservative reform scenario to an end point that excludes announced but unrealised tariff reforms. [d] Output in value-added (GDP) terms. In reform scenarios, value-added gains are usually slightly larger than corresponding output gains, (e.g. HILORANI projected GDP gains of 5.5 per cent and output gains of 4.2 per cent). **na**=Not available.

Sources: IC (1990), BIE (1990), Filmer and Dao (EPAC 1994 in this table), BIE estimates derived from Filmer and Dao (1994), IC (1995b).

The BIE's results reported in table A4.2 reflect the medium-term differences between the 'no policy change' and the 'level playing field' scenarios. In the 'no policy change' scenario the BIE assumed that existing policies, such as the planned tariff reforms announced in May 1988 would continue. The 'level playing field' reforms went further and included substantial reductions in manufacturing and agricultural assistance, with zero assistance assumed by 1995. Other reforms, in addition to those projected by the IC, included the impact of investment incentives as well as labour market reforms assumed to result in large increases in labour productivity.

The inclusion in this study of assumed labour productivity improvements was partly an attempt to simulate the impact of reforms in the industrial relations system. It was also an attempt to include some of the 'dynamic effects' that microeconomic reform is likely to induce in the economy.[2] For example, labour market reform could result in an improved working environment. Within this new environment, the adoption of

[2] Economic models find it very hard to handle such dynamic gains which result from endogenous changes in productivity, innovation and tastes. As a proxy for some of these effects, exogenous improvements in productivity can be imposed on the models as is done in the BIE, EPAC and BCA studies reported here.

technical, managerial and shop-floor improvements could emerge. These improvements or gains would be in addition to the labour productivity increases directly achieved from industrial relations reform.

The results of the BIE study (table A4.2), at the economy-wide level, indicated an increase in GDP of 9.5 per cent. At the sectoral level, the 'level playing field' scenario resulted in gains in output exceeding the 'no policy change' scenario by 6.8 per cent in agriculture, 22.4 per cent in mining, 15.1 per cent in manufacturing and 8.8 per cent in services in the medium term (table A4.2). The larger gains in manufacturing and services compared with the earlier IC projections reflect mostly the assumed labour productivity improvements in industries that are relatively large users of labour.

In this study the mining and metals industries and 'other food products' record high output growth, reflecting the magnitude of direct impacts of reforms. Large increases in projected output also occur in industries supplying capital goods — 'agricultural machinery', 'structural and other metal products', 'cement', 'plant and machinery' and 'non-residential construction'. This derived demand reflects increased investment by industries that experience first round gains as costs fall due to reforms.

Economic Planning and Advisory Council 1994 — Access Economics-Murphy model

Filmer and Dao (1994) used the static, 25-sector Access Economics-Murphy (AEM-CGE) model to analyse the effects of microeconomic reform on industry for an EPAC background paper.[3] The study included a total of 38 reforms, proposed but not fully implemented by February 1994. The reforms covered in the analysis included: reductions in tariffs and subsidies, labour market reform, facilitation of the operation of markets, transport and communications reforms, GBE reform, gains from international trade negotiations and support for emerging exporters. Also, the analysis was extended to cover a range of general government activities, including the level and efficiency of government service provision.

The authors noted that there was some debate over how many industries have potential for direct gains from reforms and how large these gains would be. So, they projected the effects of two reform scenarios. The conservative scenario included direct impacts of a limited magnitude on a relatively small number of industries. The favourable scenario assumed that all industries could move to world best practice. This discussion presents results for the conservative scenario only.[4]

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3 EPAC published a second modelling study (Dao and Jowett 1994). The essential differences between the approaches in the two EPAC papers are presented in section 4.2.

4 In the favourable scenario, GDP gains are 15.4 per cent compared with 12.7 per cent for the conservative scenario.

In addition, Filmer and Dao (1994) projected the benefits of a reduction in the sustainable rate of unemployment from 7.3 to 5.0 per cent.[5] In order to reduce the unemployment rate, they assumed:

- the labour market adjusts to reduce job mismatch;
- enterprise bargaining allows greater flexibility to balance better the supply and demand for labour;
- improved education and training, and
- the increased availability of retraining programs, ensure that the labour force has the skills demanded by industry.

The gains from lowering the unemployment rate account for about two fifths of the overall 12.7 per cent gain in GDP (table A4.3). This factor explains most of the difference between Filmer's and Dao's projections of GDP gains and the earlier studies by the IC and BIE (table A4.2).

At the sectoral level there are relatively even gains of between 12 and 14 per cent across the agricultural, mining, manufacturing and services sectors[6] (table A4.2). All of the model's twenty-five industries experience GDP growth (table A4.3). The largest growth in industry level value-added occurs in 'transport'. The highly assisted 'textiles', 'transport equipment' and 'miscellaneous manufacturing' industries initially suffer as a result of reductions in their assistance levels. However, the increased demand stemming from increased employment and the improvement in private sector productivity more than offset the negative impact of the tariff reductions (table A4.3).

Business Council of Australia 1994 — Murphy model

The BCA's study (BCA 1994) covered a similar set of reforms to those of the Filmer and Dao study (table A4.1). The BCA's baseline included the existing program of reforms at that stage, including phased tariff reductions. The reform scenario (or 'Australia 2010 scenario') included the replacement of the existing indirect tax system with a broad based consumption tax, improvements in the level and efficiency of government services, further improvements in the efficiency of GBEs, and in the private sector — improvements to labour productivity that were assumed to bridge the gap between Australian productivity levels and world's best practice (except to the extent that these gaps are due to economies of scale). The BCA indicated that the reform scenario is an optimistic forecast of what reforms might achieve.

5 Again, this could be considered as an attempt to include some dynamic effects of reform.

6 The sectoral gains in the EPAC study are relatively even, compared with the IC or BIE studies. Filmer and Dao attribute this to the allowance in their model for inflexibilities in all industries in switching production between domestic and export markets.

Table A4.3 EPAC study — longer run industry output implications of microeconomic reform

	Percentage change in industry output (conservative scenario)						
Industry	*Share of GDP*	*Infrastructure reforms incl. GBEs*	*Tariff reduction*	*Government services productivity improvements*	*Improved private sector productivity*	*Increased employment expansion*	*Total gains*
Agriculture	4.0	0.0	1.9	1.3	3.9	5.2	12.3
Mining	5.3	0.0	5.4	1.0	0.0	5.4	12.2
Manufacturing							
Food	2.1	1.2	1.2	1.2	7.4	4.9	16.0
Beverages	2.0	1.3	0.0	1.3	6.6	5.3	15.8
Textiles	0.6	0.0	-4.5	0.0	9.1	4.5	13.6
Clothing and footwear	0.8	0.0	0.0	0.0	10.0	6.7	16.7
Wood, paper & printing	2.8	0.9	0.0	0.9	5.7	5.7	13.2
Chemicals	1.2	0.0	0.0	0.0	4.2	6.3	12.5
Petroleum & coal products	2.5	1.1	1.1	1.1	3.2	5.3	11.6
Mineral products	3.2	0.8	1.6	0.8	4.9	5.7	13.9
Transport equipment	2.4	0.0	-2.2	1.1	7.6	5.4	12.0
Other machinery	2.4	0.0	0.0	1.1	6.5	5.4	13.0
Misc. manufacturing	1.2	0.0	-2.2	0.0	8.9	6.7	13.3
Services							
Electricity, gas, water	3.3	2.3	0.8	0.8	3.9	5.4	13.2
Residential building	2.3	2.2	0.0	2.2	3.4	5.6	12.4
Other construction	5.2	0.5	2.0	0.5	3.0	5.0	11.4
Wholesale, retail trade	13.2	1.0	1.0	1.4	4.9	5.3	13.6
Transport	5.4	11.6	1.9	1.0	1.4	5.3	20.8
Communication	2.1	3.7	1.2	1.2	2.5	4.9	13.6
Finance, property etc.	10.5	0.7	0.7	0.7	3.5	5.2	11.1
Public administration	2.8	0.0	0.0	3.7	0.9	5.6	9.3
Defence	1.1	0.0	0.0	7.3	0.0	4.9	12.2
Community services	12.0	0.2	-0.2	3.9	0.6	5.2	9.9
Recreational services	3.9	1.3	0.0	1.3	2.7	5.3	10.7
Ownership of dwellings	7.8	1.7	0.0	2.0	3.7	5.0	12.7
All industries	100.0	1.5	0.8	1.6	3.5	5.3	12.7

Source: Filmer and Dao (1994), Table 9b.

The BCA used the 12-sector dynamic Murphy model. The long run in this model is a much longer time period (20 years or more) than the other models examined here. And because there are fewer industries, the model assesses impacts at a more aggregated level. In this model, one industry covers 'transport and communications', whereas in AEM, two industries cover these services. In ORANI and ORANI-F, 5 industries covers these services. And in HILORANI (discussed in the next section), there are 14 transport and communication industries.

The projected effects of microeconomic reform reveal a similar pattern to previous studies (table A4.2). At the sectoral level there are widespread gains from reforms.

Overall, gains are greater than in other studies. This basically reflects a longer time horizon, larger assumed induced productivity improvements in manufacturing, and more extensive government reforms.

Table A4.4 shows projected changes in sectoral output for the baseline and reform scenarios over the period to 2010-11. In value-added (GDP) terms, the only shrinkage in absolute terms occurs in 'agriculture' in the period 1991-92 to 1995-96. This reflects mainly historical events including; the decline in commodity prices in the early 1990s and the drought that prevailed for much of this time over a large part of eastern Australia. In the forecast period — beyond the historical period — all sectors grow in the baseline, partly due to microeconomic reforms that were already under way.

Output growth is significantly stronger in the reform scenario in all sectors except 'public administration and defence' (table A4.4). This sector loses from a reduction in the level of government services as a result of the reform process. Among the other service sectors, 'transport and communications' derives large benefits from further reforms — growth is 6.6 per cent each year in the reform scenario between 1996-97 and 2000-01 for this sector, compared with 4.9 per cent in the baseline. The BCA assumes significant induced labour and capital productivity improvements in the reform scenario, with its more extensive program of reform. In all sectors, the differences between the two scenarios are smaller in the period 2001-02 to 2010-11. The difference between the growth rates of the two scenarios steadily declines over time giving an indication of the extent to which the reforms have been fully incorporated into the economy. While the growth rates in the reform scenario decline, it is important to remember that they apply to a level of national output that is permanently higher than in the baseline scenario.

IC study of Hilmer and related reforms 1995 — HILORANI model

The Council of Australian Governments asked the IC to assess the growth and government revenue implications of the Hilmer and related reforms (IC 1995e). The IC made various modifications to the ORANI model in order to trace the implications of reform on both Commonwealth and state government revenue. The overall impact of Hilmer and related reforms on state government revenues was seen as an important issue because the first round impacts of the reform process appeared to have a large negative impact on revenue collections by the states (particularly revenue from GBEs). Further, state governments were unlikely to participate in the reform process unless they were appropriately compensated for perceived revenue losses.

Table A4.4 Sectoral effects — BCA scenarios (GDP growth per annum, per cent)

Sector	Baseline scenario			Reform scenario (Australia 2010)			
	1991-92 1995-96	*1996-97 2000-01*	*2001-02 2010-11*	*1991-92 1995-96*	*1996-97 2000-01*	*2001-02 2010-11*	*Long-run gains*[a]
Agriculture	-2.4	4.9	3.4	-1.5	8.0	3.8	22.1
Mining	2.9	5.7	3.9	4.3	8.5	5.6	35.5
Manufacturing	3.5	3.5	2.8	5.7	7.5	2.9	29.0
Electricity, gas & water	2.4	3.0	2.3	2.7	5.5	2.8	20.2
Construction	1.2	3.5	2.0	2.8	6.6	1.8	19.7
Wholesale and retail trade	3.1	2.9	2.4	3.6	5.2	2.9	19.1
Transport and communications	4.9	3.7	2.6	5.7	6.6	3.1	19.1
Financial and business services	0.8	3.4	2.3	1.5	6.2	2.7	21.9
Public admin. & defence	2.8	2.5	2.2	2.8	2.5	2.2	0.6
Community services	4.2	2.5	2.3	3.7	3.5	2.7	6.0
Recreation etc. services	3.7	3.5	2.4	2.9	6.1	3.1	14.6
Ownership of dwellings	3.0	2.4	2.4	3.0	4.1	2.9	23.5
Total	2.9	3.3	2.5	3.6	6.0	3.0	20.5

Note: [a] Average annual difference between reform scenario and baseline scenario.
Source: BCA (1994), tables 3,7 and 9.

The package of Hilmer and related reforms included both Commonwealth reforms and state, territory and local government reforms. As discussed in chapter 2, Hilmer regarded regulation by all levels of government as the greatest impediment to competition. To eliminate this impediment, Hilmer proposed the removal of regulatory restrictions on competition not clearly demonstrated to be in the public interest. The IC emphasised that it was impossible to capture the full implications of the Hilmer and related reforms in a modelling exercise. However, the IC did model the impact of various reforms to the transport, communications and utilities sectors, statutory marketing arrangements, government services, unincorporated enterprises and anti-competitive legislation (see table A4.1 for details).

The IC projected that as a result of Hilmer and related reforms Australia's GDP would grow by 5.5 per cent or $23 billion a year, equivalent to $1 500 more per household per year. The IC suggested that this could represent an increase in real wages of 3 per cent and 30 000 extra jobs (or even more jobs if real wages grow by less).

The IC projected that the gains from Commonwealth reforms would increase real GDP by 1 per cent. State, territory and local government reforms would increase real GDP by 4.5 per cent (table A4.5). This result underlines the significance of gains from undertaking microeconomic reform at the state and territory level and also suggests that relatively smaller gains are attainable from further Commonwealth reforms.

Substantial revenue gains would accrue to all tiers of government following the reforms. The IC estimated that the reform package would increase Commonwealth revenue by $5.9 billion per year (6.0 per cent of total revenue), while state, territory and local governments would gain $3.0 billion per year (4.5 per cent of total revenue) in real terms.

Table A4.5 A summary of gains from reforms

	Commonwealth reforms	*State, territory and local government reforms*	*Total*
Real GDP	1.0%	4.5%	5.5%
Commonwealth revenue	$1.2 bn (1.2%)	$4.7 bn (4.8%)	$5.9 bn
State, territories and local government revenue	$0.4 bn (0.6%)	$2.6 bn (3.8%)	$3.0 bn
Total revenue	$1.6 bn	$7.3 bn	$8.9 bn
Sectoral outputs	**%**	**%**	**%**
Agriculture	0.2	4.2	4.4
Mining	4.2	14.3	18.5
Manufacturing	1.0	4.4	5.4
Services	0.7	2.7	3.4

Source: IC (1995d).

Overall, at the sectoral level, mining would gain the most from reforms with output expanding by an estimated 18.5 per cent (table A4.5). This largely reflects the degree to which mining could benefit from reforms to transport and utilities, undertaken by state and territory governments in particular. Output increases of between 4.4 per cent and 5.4 per cent were projected for the agricultural, manufacturing and services sectors.

At the industry level, the benefits of reforms are widely distributed (see table A4.7, p. 172). Gains are generally more noticeable in sectors exposed to international competition both export oriented and import competing (including textiles, clothing and motor vehicles). Very few individual industries are projected to expand or contract dramatically as a result of any individual Hilmer or related reform.[7] Overall, the vast majority of industries are clear winners from the reform package. Given the broad nature of the reforms, losses from one reform tend to be offset by gains from other reforms. Overall the small impacts of individual reforms add up to widespread substantial gains.

[7] Of the 128 industries in the HILORANI model only seven industries register losses overall. The dairy and related industries are adversely effected by reform of Commonwealth statutory marketing arrangements. While the 'railway rollings', 'non-bulk rail', 'passenger rail' and related industries are adversely affected by moves to full cost recovery.

A4.2 Why gains from reforms vary in different studies

To date we have examined the impact of microeconomic reforms at the economy-wide and broader sectoral levels as presented in various published studies. The important similarity between these models is that they all project gains from microeconomic reforms over time. However, the magnitudes of these gains differ from model to model. Table A4.6 shows differences in the projected gains from reforms between the different studies.

Table A4.6 Projected increase in GDP resulting from specified group of reforms

	IC'90	*BIE'90*	*EPAC'94*	*BCA'94*	*IC'95*
Time horizon of projections	*10+ years*	*7 years*	*10+ years*	*20+ years*	*10+ years*
Reform group	*% increase in GDP resulting from specified group of reforms*				
Transport	3.2	1.5 }	}		0.5
Communications	0.5	0.3 }	1.5 }	1.1	0.7
Utilities	0.7	0.4 }	}		1.5
Industry assistance	1.1	0.1	0.8	0.7	
– statutory marketing arrangements					0.2
Government activities					
– efficiency	1.0		1.6	2.6	1.0
– level				0.8	0.9
– indirect tax mix				3.0	
Induced improvements					
– higher productivity		7.2	3.5	5.0	
– lower unemployment			5.3	8.0	
Unincorporated sector					0.3
Other					0.4
Total	6.5	9.5	12.7	20.5	5.5

Sources: Filmer and Dao (EPAC 1994 in this table), table 8; IC (1990), table a1.2; BIE (1990), tables 6.3.0 and 6.3.1; BCA (1994), table 9; IC (1995d), tables c2.4, c2.5 and c3.2.

There are a number of reasons why variations in model results are likely to occur. These include differences in the:

- range of reforms covered;
- magnitudes of specified shocks or cost savings;
- assumptions about how gains flow through the economy (ie model closure);
- databases; and
- key parameters.

The role of each of these factors is discussed below.

Range of reforms covered

The microeconomic reform agenda has grown over time. This means that modellers have added new reforms to their projections. However, if reforms are already underway, further gains from a particular reform are likely to be smaller than in earlier projections. And in some cases, modellers relegate certain reforms to the base scenario. For example, tariff reductions were an important reform in the IC's earlier work (IC 1990). But the IC excluded tariff cuts from their reform scenario in the HILORANI projections (table A4.1).

EPAC published the results of two modelling exercises in 1994. In the first (Filmer and Dao 1994, described earlier in this appendix), they froze reforms at the starting point (1994) in their base scenario. Their reform scenario assessed the impacts of further reforms plus further gains from existing (or already announced) reforms. In the later study, EPAC used a similar base scenario (Dao and Jowett 1994). But they included two reform scenarios. The first scenario tracked the effects of further gains from existing reforms. The second projected gains from further reforms. Thus the magnitude of gains varied due to these different scenarios.

Magnitudes of specified shocks or cost savings

The microeconomic reform agenda influences the scope of reforms incorporated into models. Further to this, the magnitude of direct gains from reforms will have a large bearing on economy-wide effects. Modellers rely on partial studies, including for example, the BIE benchmarking series, to estimate and impose direct impacts of reforms on the models. Such partial studies might indicate how far a particular infrastructure industry is from world best practice. In addition, they may also discuss whether it is possible with the implementation of reforms to achieve best practice in the Australian environment. For example, Australia's large land area and small population may make it impossible to achieve best practice in some infrastructure industries. Assumptions of this nature lead to 'shocks' of different sizes being applied to models for a particular reform scenario and result in varied impacts.

Some differences in the magnitude of the applied 'shock' arise from the stage or degree of implementation of a particular reform. For example, reduced industry assistance played a bigger part in the IC (1990) study than later studies because its starting point was before the reforms had any effect.

Assumptions about how gains flow through the economy

How a model distributes gains from reforms through the economy is dependent on the model 'closure' and can also lead to differences in model results. The 'closure' refers to which variables are determined outside the model (i.e. exogenous) and which are generated by the model (i.e. endogenous).

A model can only generate results for a given scenario if the modeller treats some variables as exogenous. Thus in practice a number of values for a number of variables are selected by the modeller and are supplied as inputs to the model. The form of closure, therefore, has an important influence on the results, as it determines the constraints under which different groups in the economy are deemed to be operating. The decision on how the gains from reform are distributed between the various options including for example, applying them to debt repayments, enabling increased investment or increased consumption can result in significantly different results. The BIE (1990) study, for example, examines a situation where governments might wish to repay debt if they perceive current debt levels as unsustainable. Thus in this scenario the emphasis is on improving the current account and thereby reducing net foreign debt as a proportion of GDP. As a result of this particular closure, few of the gains from microeconomic reform are reflected in increases in real consumption in the BIE study compared with other studies (see table A4.2).

Databases

Databases may vary between models due to the following:

- variations in the input-output data used;
- national accounts data differ in year from model to model; and
- different models have different levels of aggregation.

The lack of up-to-date databases may have important implications for the results of a modelling exercise. Some sectors of the economy, such as agriculture, may have cost structures that vary considerably from year to year.[8] If a cost structure no longer reflects a particular industry's inputs, then the projected effects of reforms may differ from what they would be with an up-to-date cost structure. Such effects may not result in significant differences at the economy-wide level, but at the industry level, magnitudes of change could differ greatly. Most models now use updated national accounts data (e.g. AEM-CGE, Murphy and HILORANI). In general, even if the input-output structure of a model is dated, modellers include more recent data from other sources in an attempt to correct areas of particular concern.

The level of industry aggregation in a model also has an effect on the results. Models that have more industries demand more data. This may make it more difficult to obtain recent data and to update the model's database. The trade off for having greater disaggregation is that such a model projects more detailed information on the industry composition of changes following reforms. For example, with its 14 transport and communication industries, HILORANI users can distinguish between the effects of,

[8] To overcome this in ORANI and HILORANI, the input structure of agricultural industries is based on weights derived from ten years' data. The actual year of the database is used for the agricultural industry's output only.

for example, individual road, rail and telecommunications reforms. This is not possible in the Murphy model with its single 'transport and communications' industry. This greater 'precision' could also be reflected in variations in results at the macro level between various models.

Key parameters

Parameters that determine supply and demand relationships and responsiveness of economic agents to 'shocks' may also vary between models. This in turn can drive variations in sectoral outcomes. The 1990 IC projections raised concerns about the dominance of mining in the gains from microeconomic reform (see table A4.2). In the ORANI model, the mining sector combined price-responsive supply with price-responsive export demand. This meant that small productivity increases led to large gains in this export-oriented sector.[9]

In response to the dominance of mining in the reform scenarios (IAC 1989, IC 1990), the IC modified the ORANI model. They effectively fixed the ore resource available to mining industries, thereby reducing the price responsiveness of mining supply. As a consequence, the model now projects smaller increases in mining output from a given range of reforms, (however there is little change in the economy-wide results). This constraint applies to HILORANI (IC 1995e). Since mining has a small share of GDP, changing the parameters for mining has little effect on total GDP.[10]

Yetton, Davis and Swan (1992) felt that ORANI was likely to understate the gains to manufacturing industries from reforms. They modified ORANI further by extending the list of endogenous exporters (ie industries whose export volumes vary in response to prices). Endogenous exporters have more scope for gains following reforms, within a model, than industries with fixed export volumes. Yetton et al. did not, however, project stronger growth in manufacturing arising from the inclusion of the constraint to mining output. But extending the list of endogenous exporters resulted in increased manufacturing exports (McDougall and Wear 1992).

Wittwer and Connolly (1993) completed a further study to extend the list of endogenous exporters in ORANI. They designated industries as potentially export

[9] Various modellers have expressed different opinions on the realism of such gains. McDougall and Wear (1993) stated that such gains were within the bounds of recent experience. For example, between 1986-87 and 1989-90, Australia's value of production of the five mining industries in ORANI increased by 16 per cent in real terms (ABS 1994; ABS 1990). From 1989-90 to 1993-94, their real value of exports increased by 20 per cent (Waring and Hogan 1994).

[10] Mining production is a relatively small part of the economy, accounting for around 4.3 per cent of GDP. However, mining does account for about 35 per cent of total exports, reflecting Australia's resource-based economy (ABARE 1994).

oriented if exports approached or exceeded 20 per cent of production.[11] They agreed with some additions of Yetton et al. to the list of manufacturing endogenous exporters, including 'electronic equipment', 'basic chemicals nec', 'construction etc machinery' and 'machinery equipment nec'. But they questioned adding other industries, including 'chemical fertilisers' and 'petroleum and coal products'. Other suitable industries, including 'alcoholic beverages', were left off the list.

To summarise, when dealing with differences between model parameters and the choice of endogenous exporters, outcomes tend to change at the industry level. Hence, these issues are more of a concern in industry-specific studies. But, in comparing the outcome of different industries in a highly disaggregated model, modellers need to be wary of possible assumption-driven differences.

A4.3 Limitations of modelling studies

By necessity, all models have simplifying assumptions. Modellers of economy-wide effects make assumptions about many variables. So results projected by these models are illustrative only, showing how direct cost savings due to particular reforms at the industry level might impact on the whole economy.

The discussion in this section covers the limitations of modelling studies under the following headings:

- limited information (ie demands on data and measures outside a typical economic framework); and
- the timing of a reform and its impacts.

Limited information

Models rely on limited information. Typically there are difficulties in obtaining data at a highly disaggregated level, so as to project the effects of reforms on particular industries or groups (as discussed above). Further, a lot of information relevant to markets lies outside a typical economic framework. For example, models do not capture induced quality improvements. Some firms may attempt to improve the quality of their products or services in order to maintain profitability following reforms (see chapter 7). Such improvements are difficult to measure and consequently difficult to model. And consumers may benefit without apparent changes in prices or sales volumes. It is possible to impose a taste change on a model just as it is possible to impose a productivity change on a model. Indeed, dynamic or induced gains from reforms may be more significant than the direct gains. But modellers cannot attribute

[11] If exports are a small proportion of production, allowing exports to expand will have a correspondingly small effect on total output.

great accuracy to their estimates of general gains if they impose direct induced gains by assumption.

The BIE's benchmarking studies and this project on monitoring microeconomic reform at the firm and industry level may provide better information on the realisable benefits of reforms. In particular, such studies may allow better assessments of the magnitude of dynamic gains induced by reforms, such as gains in labour and capital productivity.

The timing of a reform and its impacts

The timing of benefits is of particular interest to policy makers. If benefits from reforms do not appear quickly, the task of persuading various interest groups that particular reforms are likely to be beneficial becomes more difficult. It might assist the reform debate if modellers can estimate the time it takes for benefits to emerge. Estimating the benefits of a particular reform over time is more complicated than estimating the eventual benefit alone.

None of the general equilibrium studies referred to in this appendix capture the costs associated with undertaking adjustments in response to microeconomic reforms. Further, to capture such costs in a cost-benefit framework, we would need to know the timing of costs and benefits of reforms. When analysts ascribe a discount rate to costs and benefits, timing issues are important. It is possible that studies that improve the estimates of the size of gains will also improve our knowledge of the timing of benefits from reforms.

Model results may indicate which occupational groups are winners and losers from reforms. For example, early IC projections (IC 1990) indicated that job losses in the textile, clothing and footwear industries would result from reforms (particularly from reductions in assistance), while jobs would be created in various export-oriented industries. But modellers need more information to ascribe the timing of job shifts. In this regard, the rate of response of economic agents is important.

In discussing timing issues further, it is useful to cite some of the differences between static models, including ORANI, AEM-CGE and HILORANI, and dynamic models, including ORANI-F and the Murphy model.

Some of the attributes of static models are as follows:

- no assumptions about the absolute values of variables such as GDP in the base scenario are made (i.e. a scenario excluding proposed reforms);
- results are presented as a comparison of end-points;[12] and

[12] In this appendix, to compare models both static and dynamic, all results are presented in this manner (with additional information provided on the BCA study in table A4.4).

- variables that rely on both stocks and flows are not captured (e.g. the flow of annual interest rate payments on the stock of net foreign debt).

In contrast, dynamic models:

- make year by year forecasts of the macroeconomic environment in the baseline;
- compare the year-by-year progress of a reform scenario to the baseline; and
- capture variables reliant on a time horizon (for example, net foreign debt).

Potentially, a dynamic model offers a lot more detail on how the various components of the economy will respond to reforms. But without better information and details on the response of economic agents to direct impacts, the year-by-year projections of a dynamic model are prone to error. The BCA summarises the use of dynamic models for analysing the impact of microeconomic reforms as follows:

> The two long-range scenarios [in the BCA study] are inevitably surrounded by wide margins of error and should not be considered in isolation. Rather, the aim is to test the effects of further economic reform by analysing the differences between the two scenarios. These estimates of the gains from reform are subject to far less uncertainty than any individual scenario (BCA 1994, p. 48).

The most reliable information provided by a dynamic model (i.e. the end-point difference between the scenarios) is similar to that of a static model. Utilisation of the potential advantages of dynamic models will require further partial studies. But gaining knowledge of the timing of benefits, and indeed costs, is an inherently difficult exercise.

A4.4 Summary

This appendix examines the results of various modelling exercises of the economy-wide gains from microeconomic reform. While the gains from reforms differ (reflecting the coverage of reforms and uncertainty about the direct impacts) a key result is that all models project significant gains from microeconomic reform at the macro level.

Differences between the model results become more pronounced at the sectoral and industry level reflecting the model's different levels of disaggregation. A more disaggregated model, while being more demanding of industry-level data and dependent on the accuracy of these data, has the potential to give greater insights into the linkages between industries that could be lost in a higher level of aggregation. Despite this, the model results presented here suggest that the broader the range of reforms, the greater is the likelihood that all sectors (and many individual industries) of the economy will benefit. This is highlighted by the fact that highly assisted industries such as motor vehicles and textiles and clothing were projected to lose from reforms in early modelling exercises (resulting from reductions in assistance, IC (1990) while these same industries are expected to make significant gains from the Hilmer and related reforms modelled by the IC using HILORANI (IC 1995e). However, it remains unclear whether the gains from the later reforms will more than offset the losses experienced from the earlier reduction in assistance.

Table A4.7 HILORANI results by industry[a]

	Impact of industry output (percentage change) of reforms by the:		
Industry	***Commonwealth***	***States***	***Total***
Black coal	5.85	23.91	29.76
Non ferrous metals	5.40	24.07	29.47
Gas	1.38	22.66	24.04
Non ferrous metal ores	5.15	17.50	22.65
Sugar cane	6.63	14.71	21.34
Raw sugar	6.15	13.75	19.90
Private iron ore rail transport	4.68	13.13	17.81
Ferrous metal ores	4.60	12.95	17.55
Mining rail transport	3.34	12.72	16.06
Manufacturing nec	4.84	10.96	15.80
Minerals nec	4.14	11.43	15.57
Northern beef	5.27	9.77	15.04
Services to mining nec	3.36	9.88	13.24
Grain freight rail transport	0.49	10.07	10.56
Food products nec	2.17	7.61	9.78
Motor vehicles	1.94	7.36	9.30
Man made fibres	2.41	6.48	8.89
Wheat sheep zone	1.39	7.34	8.73
Construction etc machinery	1.83	6.86	8.69
Pigs	2.16	5.91	8.07
Telecommunications	5.80	2.26	8.06
Cotton ginning	2.28	5.76	8.04
Water transport	1.81	6.20	8.01
Wool scouring	2.20	5.63	7.83
Cotton fabrics	2.07	5.56	7.63
Meat products	2.01	5.61	7.62
Chemical products nec	1.73	5.49	7.22
Rubber products	1.70	5.49	7.19
Road freight transport	1.11	5.82	6.93
Basic chemicals	1.50	5.35	6.85
Ownership of dwelling	0.77	5.91	6.68
Chemical fertilisers	1.22	5.31	6.53
Residential building	0.96	5.36	6.32
Sawmill products	1.38	4.38	5.76
Poultry	1.41	3.86	5.27
Alcoholic beverages	1.28	3.95	5.23
Electricity	0.98	4.21	5.19
Clay products	1.04	4.10	5.14
Other farming export	1.08	4.00	5.08
Postal services	2.83	2.13	4.96
Paints	0.98	3.43	4.41
Petroleum coal products	0.99	3.39	4.38
International air transport	1.76	2.58	4.34

Table A4.7 HILORANI results by industry[a] (continued)

	Impact of industry output (percentage change) of reforms by the:		
Industry	***Commonwealth***	***States***	***Total***
Plastic related products	0.80	3.48	4.28
Non metallic mineral	0.90	3.31	4.21
Water sewerage drainage	0.73	3.45	4.18
Agricultural machinery	3.10	1.07	4.17
Leather products	1.17	2.96	4.13
Pulp paper paperboard	0.95	3.17	4.12
Repairs nec	1.03	3.07	4.10
Household appliances	0.91	3.18	4.09
Domestic air transport	1.52	2.57	4.09
Banking	0.84	3.21	4.05
Pharmaceuticals	0.92	3.11	4.03
Tobacco products	2.44	1.50	3.94
Joinery and wood products	0.74	3.06	3.80
Wool worsted fabrics	0.85	2.87	3.72
Ships and boats	1.15	2.57	3.72
Textile products nec	0.94	2.74	3.68
Veneers manufactured wood boards	0.71	2.90	3.61
Scientific etc equipment	1.10	2.51	3.61
Floor coverings etc	0.60	2.98	3.58
Aircraft	1.38	2.20	3.58
Non bank finance	0.79	2.79	3.58
Business services	0.79	2.76	3.55
Footwear	1.03	2.49	3.52
Wholesale trade	0.44	3.08	3.52
Entertainment leisure	0.76	2.72	3.48
Investment nec	0.83	2.63	3.46
Restaurants hotels clubs	0.64	2.79	3.43
Furniture and mattresses	0.44	2.97	3.41
Signs writing equipment	0.95	2.45	3.40
Personal services	0.56	2.61	3.17
Fishing and hunting	0.73	2.38	3.11
Potatoes	0.60	2.50	3.10
Basic iron and steel	1.04	2.04	3.08
Glass and glass products	0.24	2.83	3.07
Services to transport	0.11	2.78	2.89
Sheet metal products	0.68	2.12	2.80
Insurance nec	0.58	2.18	2.76
Forestry and logging	0.87	1.87	2.74
Bags and containers	0.62	2.10	2.72
Margarine oils and fats	0.57	2.14	2.71
Metal products nec	1.30	1.39	2.69
Services to agriculture	0.61	2.05	2.66

Table A4.7 HILORANI results by industry [a] (continued)

	Impact of industry output (percentage change) of reforms by the:		
Industry	***Commonwealth***	***States***	***Total***
Mechanical repairs	0.59	2.00	2.59
Printing stationary	0.65	1.80	2.45
Electronic equipment	-0.62	3.07	2.45
Cement	0.59	1.81	2.40
Textile finishing	0.61	1.74	2.35
Machinery equipment	1.39	0.96	2.35
Health	0.31	1.88	2.19
Paper products nec	0.57	1.61	2.18
Publishing printing	0.65	1.53	2.18
Ready mixed concrete	0.53	1.61	2.14
Electrical equipment	-0.52	2.52	2.00
Beer and malt	0.33	1.66	1.99
Welfare etc services	0.50	1.46	1.96
Cosmetics	0.46	1.49	1.95
Soap and detergents	0.45	1.38	1.83
Concrete products	0.49	1.32	1.81
Confectionery	0.30	1.39	1.69
Road passenger transport	0.19	1.44	1.63
Other farming import	-1.14	2.72	1.58
Knitting mills	0.43	1.14	1.57
Clothing	0.39	1.03	1.42
Pastoral zone	1.38	0.00	1.38
Fruit and vegetables	0.24	1.08	1.32
Retail trade	0.39	0.92	1.31
Flour mill cereal products	0.18	1.09	1.27
High rainfall zone	1.46	-0.27	1.19
Oil gas and brown coal	1.05	0.04	1.09
Soft drinks cordials	0.22	0.85	1.07
Construction	0.23	0.74	0.97
Bread cakes biscuits	0.17	0.62	0.79
Public administration	0.19	0.48	0.67
Education libraries	0.09	0.47	0.56
Woodchips	0.00	0.00	0.00
Railway fixed costs	0.00	0.00	0.00
Defence	0.00	0.00	0.00
Non competing imports	0.00	0.00	0.00
Structural metal products	0.81	-2.65	-1.84
Pasteurised milk	-3.00	0.74	-2.26
Rail passenger transport	0.10	-2.43	-2.33
Locomotives rollings	0.79	-10.78	-9.99
Non bulk rail transport	0.01	-12.98	-12.97
Milk cattle	-15.54	0.52	-15.02
Milk products	-19.99	0.60	-19.39

Note: [a] The HILORANI model covers 128 separate industry categories.
Source: IC (1995b) table C2.4 and C2.8.

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