



Economic Rationalism - The Key to National Competitive Advantage, Restructuring and Employment Growth?

**Lessons Drawn from the Policies Advocated and
Implemented Under the Hawke and Keating
Governments of 1983 to 1996.**

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Abstract

This thesis examines whether economic rationalist policies, as implemented by Labor, and as recommended by rationalists in the 1983 to 1996 period, are the key to achieving national competitive advantage, restructuring and employment growth. It is argued that, while the policies made some progress in this regard, more could have been achieved through the use of strategic industry policies. The key weakness of the rationalist policies advocated in the period is argued to be that they were based on an uncritical faith in market forces - almost alone - to produce economic prosperity.

National competitive advantage is crucially dependent on the capacity to innovate. Markets fail to produce competence in a range of activities crucial to competing on the basis of innovation, such as research and development (R&D), technology diffusion, work organisation, management, education and training, finance and export marketing. This thesis argues that strategic industry policies can foster national excellence in such capabilities, and so bring improvements in national competitive advantage, restructuring and employment growth, beyond that achievable by markets alone.

Statement

This thesis contains no material which has been accepted for the award of any other degree or diploma in any University or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by any other person, except where due reference has been made in the text.

I give consent to this copy of my thesis, when deposited in the University Library, being available for loan and photocopying.

25 August 1999

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Introduction

The Key Focus

The period 1983 to 1996 was a decisive turning point in Australia's economic history. It was a period in which the Labor Party placed unprecedented faith in the capacity of free markets to deliver economic prosperity. This faith underpinned a range of economic policies implemented in the period, such as tariff cuts, free market reform of Australia's economic infrastructure, small government policies, deregulation of the financial system, wage restraint and deregulation of the labour market.

In this period, economic rationalism came to be widely accepted as the key to international competitiveness by most of the key decision making groups in Australian society, including the media, the Opposition Coalition parties, business, the financial markets, the economic bureaucracy and key government advisers. Rationalism achieved a remarkable power in the period, such that anyone seeking to influence social or economic policy had to argue within the rationalist paradigm.¹ When a particular form of knowledge pivotal to determining economic and social outcomes comes to be widely accepted as '...divine wisdom...'² careful analysis seems vital, especially given that globalisation has increased the speed at which national economic performance can ascend or decline.³ If Australia has attached itself to a flawed economic paradigm, the decline in living standards and employment opportunities will be swift.

This thesis examines whether economic rationalist policies, as implemented by Labor, and as recommended by rationalists in the period 1983 to 1996, are the key to achieving national competitive advantage, restructuring and employment growth. The policies of the Industry Commission (IC) are given prominence in the discussion, as they are key advisors to the Federal Government on industry policy, and their recommendations enjoy currency among the economic elite. IC recommendations reflect 'textbook' rationalism, with free market solutions invariably recommended.⁴ Referring to IC views on key industry policies facilitates analysis of hardline rationalist policies recommended by the IC, but not implemented by Labor.

Of course, Labor was not always purely rationalist, and its implementation of some active industry policies - such as the 150 per cent R&D tax concession - illustrated how well-designed industry programs can advance economic performance beyond that achievable by markets alone. However, rationalism was the key thrust of

¹ Kenneth Davidson, 'Defrocking the priests' in Donald Horne (ed.), *The Trouble With Economic Rationalism*, Scribe Publications, Newham, Victoria, 1992, pp.58-62 at p.58.

² Donald Horne, 'It's time for a think' in Donald Horne (ed.), op. cit., pp.2-12 at p.6.

³ Abe David & Ted Wheelwright, *The Third Wave: Australian and Asian Capitalism*, Left Book Club Co-operative, Newtown, New South Wales, 1989, p.154,155,162,163; and Stephen S. Cohen & John Zysman, *Manufacturing Matters: The Myth of the Post-Industrial Economy*, Basic Books Inc., New York, USA, 1987, p.xiii.

⁴ Peter Ewer, Winton Higgins & Annette Stevens, *Unions and the Future of Australian Manufacturing*, Allen and Unwin, Sydney, 1987, p.126. John Warhurst & Jenny Stewart, ch.7 'Manufacturing industry policies' in Brian W. Head & Allan Patience (eds), *From Fraser to Hawke: Australian Public Policy in the 1980s*, Longman Cheshire, Melbourne, 1989, pp.159-176 at p.161.

Labor's economic policies, which justifies using this period to analyse the utility of economic rationalism.

It should be noted from the outset that this thesis is centrally concerned with policy in the abstract. It critiques the economic rationalist policies implemented or recommended in the period and offers alternative economic policy directions. It does not seek to engage the literature on how the ideas of the Chicago School came to dominate the thinking of the economic bureaucracy, as discussed in books such as Michael Pusey's *Economic Rationalism in Canberra*.⁵ Nor does it seek to deal with the political process of establishing an economic agenda and having it maintained by political parties and the bureaucracy.

Key Concepts

Before discussing the arguments and structure of the thesis, the key concepts examined - namely 'economic rationalism', 'industry policy' and 'restructuring' - need to be defined and discussed. This is important because these terms do not have universally accepted meanings.

For some, 'economic rationalism' is synonymous with 'neo-classical economics'.⁶ The primary focus of this thesis is not on progressive neoclassical economics, which has long endorsed at least a minimal role for government to correct areas of market failure.⁷

The key focus of this thesis is on 'economic rationalism' as discussed and implemented by policy elites in the period 1983 to 1996. Modern Australian rationalism is dominated by the assumptions that a market allocation of resources maximises efficiency and growth, and that industry policy invariably reduces growth. As rationalists admit, they place substantial faith in the market - almost alone - to enhance economic welfare.⁸ Bob Hawke said in the Curtin Lecture of 1983 that: 'Social Democrats have no reason to deny the capacity of markets to allocate resources efficiently...'⁹ Hawke's key adviser Ross Garnaut advocated '...extensive

⁵ Michael Pusey, *Economic Rationalism in Canberra: A Nation Building State Changes its Mind*, Cambridge University Press, Cambridge, England, 1991.

⁶ David Clark, 'Economic rationalism in Australia', *The Australian Financial Review*, 20 September 1995, p.32,33 at p.32.

⁷ Stuart Rees, Gordon Rodley & Frank Stilwell (eds), *Beyond the Market: Alternatives to Economic Rationalism*, Pluto Press, Leichhardt, New South Wales, 1993, p.9.

⁸ Rationalists who acknowledge this include: Ian R. Harper & Phillip J. Leslie, 'The case of financial deregulation: "Economic rationalism on trial"' in Stephen King & Peter Lloyd (eds), *Economic Rationalism: Dead End or Way Forward?*, Allen and Unwin, St Leonards, New South Wales, 1993, pp.84-107 at p.88; and R. Lattimore, B. Martin, A. Madge & J. Mills, *Design Principles for Small Business Programs and Regulations*, AusInfo, Canberra, 1998, p.48. Rationalist critics who view this as the key defining element of rationalism include: Frank Stilwell, ch.2 'Economic rationalism: Sound foundations for policy?' in Stuart Rees, Gordon Rodley & Frank Stilwell (eds), op. cit., pp.27-37 at p.27; John Carroll, 'Economic rationalism and its consequences' in John Carroll & Robert Manne (eds), *Shutdown: The Failure of Economic Rationalism and How to Rescue Australia*, Text Publishing Company, Melbourne, 1992, pp.7-26 at p.7; and Michael Pusey, *Reclaiming the Middle Ground...from New Right Economic Rationalism - A Paper Presented at The University of Melbourne, Monday/Tuesday, 15 & 16 February 1993 to a Conference on Economic Rationalism? Economic Policies for the 1990s*, Unpublished, 1993, p.9.

⁹ Paul Kelly, *The End of Certainty: The Story of the 1980s*, Allen and Unwin, St Leonards, New South Wales, 1992, p.94.

use of markets in the allocation of resources...'¹⁰ and influential rationalist Tony Cole argued that: 'A major role for government is to ensure that market signals get through to individuals and firms.'¹¹ At their most extreme, rationalists automatically assume that the costs of government intervention will outweigh its benefits.¹² Pusey is only slightly overstating the position when he writes: 'Economic rationalism' is a doctrine which says...that markets and money can *always*, at least in principle, deliver better outcomes than states and bureaucracies.'¹³ It is this key defining feature of economic rationalism, namely its faith in free markets to deliver economic prosperity, that is the key focus of this thesis.

'Industry policy' also has no universally accepted meaning. For much of Australia's history, 'industry policy' was conceived as referring primarily to the free trade/protection debate. The Brigden Report of 1929, which was taken to legitimise continuing protection, was a classic of the free trade/protection notion of industry policy, as its central question concerned whether Australia would be more prosperous under protectionist or free trade policies.¹⁴ Even during the 1980s, a significant proportion of Australia's total assistance regime was made up of tariffs and quantitative import restrictions.¹⁵ Today, people advocating an active role for government are still sometimes labelled 'protectionists', even where they explicitly reject the use of tariffs and quotas as tools of industry development.

Others view 'industry policy' as referring to those policies that favour particular sectors over others. In some instances, such authors state that while such 'sectoral' policies are ill advised, some active industry policies, such as R&D assistance, may be appropriate, where such assistance is available to firms throughout the economy. The key flaw in this conception is that all government policies favour certain sectors more than others. For example, tertiary education and R&D policies will favour knowledge intensive sectors more than others, even where they are made available to all sectors.

This thesis takes 'industry policy' or 'strategic industry policy' to refer to *all* the ways that government influences industry, from macroeconomic policy to regulation and to more commonly accepted 'industry policy' areas like R&D. This includes areas like education, which have important social purposes, quite separate from advancing the cause of industry. This broad definition of industry policy is important because

¹⁰ Ross Garnaut, ch.2 'Trade and industrial policy after the Uruguay Round' in Michael Costa & Michael Easson (eds), *Australian Industry: What Policy?*, Pluto Press in Association with the Lloyd Ross Forum of the Labor Council of New South Wales, Leichhardt, New South Wales, 1991, pp.47-68 at p.62.

¹¹ Tony Cole, ch.4 'Australia and the world trade environment: The difficult road to competitiveness: What is the government's role?' in Michael Costa & Michael Easson (eds), *op. cit.*, pp.97-106 at p.103.

¹² For example, in Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 1: Report*, Industry Commission, Canberra, 1993, p.222, the IC argued that '...policies such as tax concessions...lead to a misallocation of resources among economic activities, thereby reducing national income...'

¹³ Michael Pusey, *Reclaiming the Middle Ground From New Right Economic Rationalism*, *op. cit.*, p.4.

¹⁴ J.B. Brigden, D.B. Copland, E.C. Dyason, L.F. Giblin & C.H. Wickens, *Australian Tariff: An Economic Enquiry*, Melbourne University Press in association with MacMillan & Co. Ltd., Melbourne, 1929.

¹⁵ Robert Albon & Rod Falvey, ch.7 'Trade policy and microeconomic reform in Australian manufacturing' in Peter Forsyth (ed.), *Microeconomic Reform in Australia*, Allen and Unwin, St Leonards, New South Wales, 1992, pp.145-163 at p.151.

coherent industry policies can be implemented only where the totality of the effect of all government policies on industry are considered. Each component of government policy can then be directed towards an overall strategy for industry, rather than each being directed toward different ends. Indeed, it appears that narrower conceptions of industry policy may have produced negative results. For example, the tariff reduction policies of the 1991 Industry Statement served to exacerbate unemployment in the short-to-medium term, at the same time as numerous other policies, such as free market infrastructure reform and 'boom-bust' macroeconomic policies, were also reducing employment. In an economic context of domestic and international recession, such policies appeared to exacerbate the economic hardship experienced in the period.

The term 'restructuring' also has no universally accepted meaning. The word is often used loosely, to refer to economic reform generally. In this thesis, 'restructuring' is taken to refer to the process of structural change, whereby resources move out of firms and sectors in decline and into firms and sectors experiencing growth. Thus, the term encompasses changes in the composition of output and exports, both in the economy as a whole, as well as within industries and sectors.

Restructuring is a central consideration in this thesis because Australia's commodity dependent industry and export structures have been a key cause of the nation's modest economic performance over the last three or four decades. World trade growth has been relatively slow for mining and agriculture over this period, while world trade in elaborately transformed manufactures (ETMs) and sophisticated services has grown rapidly. Thus, increased national economic prosperity is, to a significant extent, dependent on Australia's capacity to restructure the economy such that more exports come from those sectors experiencing high world trade growth.

Given the importance of restructuring to Australia's economic future, the thesis analyses the capacity of economic rationalism to restructure the Australian economy. Rationalists make strong claims that free markets can produce efficient resource allocation. If true, rationalist policies should result in changes to the composition of Australia's trade and output such as to produce surging economic prosperity.¹⁶

Structure and Key Arguments

The structure and key arguments of this thesis are as follows:

In part one, *Free Market Reforms*, three key economic rationalist policies implemented in the period are examined, namely tariff cuts (chapter one), free market reform of Australia's economic infrastructure (chapter two), and small government policies (chapter three). Chapter four then completes part one by examining the progress made in the period in advancing international competitiveness, restructuring and employment growth. The broad thrust of the argument is that rationalist policies did

¹⁶ Max Walsh, ch.2 'The demise of protectionism' in Chris Jones, Chris James & Andrew Norton (eds), *A Defence of Economic Rationalism*, Allen and Unwin, St Leonards, New South Wales, 1993, pp.13-29 at p.19 implies that having free trade and no industry policy will bring '...an optimum economic structure for national productivity.'

appear to bring some net economic benefits. However, these benefits were associated with significant dislocation. Furthermore, the benefits appeared to be moderate or minor. The policies did not make a significant net contribution to employment growth, produced only moderate restructuring and did not bring a major surge in national competitiveness. Rationalist policies appeared more effective in facilitating the 'release' of resources from firms and sectors in decline, than in fostering the development and growth of new firms and emerging sectors. Mass unemployment remained at the end of the period. More needed to be done to foster the 'growth side' of restructuring.

In part two, *Economic Rationalism: The Key to National Competitive Advantage, Restructuring and Employment Growth?*, the thesis examines why economic rationalism may have produced only modest results.

In chapter five, a critique is made of the overall rationalist approach to economic policymaking in the period. It is argued that the key flaw in the rationalist economic framework was the view that free markets - virtually alone - can bring sound economic outcomes. In the Hawke-Keating years, rationalists rarely engaged in an active exploration of how industry policies could increase growth over a market allocation of resources, and tended to simply assume that industry policies would reduce economic welfare. This approach fails to acknowledge that the private sector growth has always been crucially dependent on government investment and government support structures. The rationalist framework therefore has the capacity to limit economic prosperity by failing to foster those capabilities crucial to national economic development, but subject to market failure.

The major limitation of this rationalist 'no industry policy' approach is that it fails to foster an innovation-driven economy. This is a serious weakness because - as chapter six argues - the capacity to innovate is the most important determinant of employment growth, restructuring and national competitive advantage. The term 'innovation' denotes the creation of new or substantially changed products and processes. It encompasses a vast array of innovative activities needed to create new products and improve efficiency, such as R&D, work re-organisation and marketing.¹⁷ Innovation is the key to national competitive advantage because success on world markets now depends on being able to consistently create new, high quality, sophisticated products that meet rapidly changing consumer demands. Innovation is central to restructuring and employment growth because it drives domestic and export sales growth, the development of new firms and the growth of emerging market segments.

The key argument made in the remainder of the thesis - chapters seven to 14 - is that rationalism can not produce an innovation-driven economy. Markets fail in those capabilities crucial to achieving an innovation-driven economy, such as R&D, technology diffusion and export marketing, yet rationalism rules out strategic interventions to build up excellence in such capabilities. Strategic industry policies can foster excellence in these capabilities and so help to create an innovation-driven

¹⁷ Barraclough and Co., *Enterprise Improvement Through Innovation: A Study for AusIndustry* by Barraclough and Co., Barraclough and Co., n.p., 1996, p.15,16.

economy. In this way, strategic industry policies can bring superior outcomes for employment growth, restructuring and national competitiveness than market-based policies alone.

In chapter seven, the structure and the arguments in chapters eight to 14 are outlined. The chapter commences by introducing the 'innovation chain' concept. The 'innovation chain' refers to those capabilities that must be mastered if a nation's firms are to consistently achieve product and process innovation. Each main capability is discussed in each of the remaining chapters as follows:

- research and development (chapter eight);
- technology diffusion (chapter nine);
- work organisation (chapter 10);
- management (chapter 11);
- education and training (chapter 12);
- finance (chapter 13); and
- export marketing (chapter 14).

These capabilities can be viewed as forming an 'innovation chain' because a firm or a nation will not be able to consistently achieve product and process innovation if it can not achieve excellence in every capability in the innovation chain. For example, the full commercial potential of an innovative idea may not be tapped if managers can not effectively oversee R&D projects or export drives, or if workers can not effectively apply technology or implement innovative work processes.

Chapters eight to 14 generally have four sections. In the first section, the importance of the particular capability considered in the chapter to achieving innovation, and in turn, competitive advantage, restructuring and employment growth, is examined. The central thesis that strategic industry policies are vital to creating an innovation-driven economy is developed and evidenced by sections two to four in each chapter. In section two, it is argued that the capability in question is subject to market failure and that Australia's weaknesses in the area are preventing the nation from competing through innovation. In section three, it is argued that rationalist policies have not and will not produce excellence in the capability. In spite of market failure, rationalists advocate little or no active industry policy to improve Australia's poor performance in the area. Finally, in section four, overviews of some of the government policies and programs that could improve performance in the capability are provided. These fourth sections, while not intended to be comprehensive, are important to demonstrating that strategic industry policies can help to create competitive advantage for firms and the nation through innovation.

A key theme in this thesis is that economic rationalists, in their certainty that markets – virtually alone – can produce economic prosperity, have 'choked off' economic debate in those areas crucial to establishing a competitive, high employment growth economy. It is apparent that, in many areas, relatively unfettered markets produce

reasonable outcomes (albeit backed by a range of support structures provided by government, including the maintenance of a system of law and public administration, health, education, economic infrastructure, and scientific and technological expertise.) The most difficult and decisive question is: 'In what areas and how can government assist in improving economic performance?' While rationalists focus rigorously on the weaknesses of industry policies and why they should be eliminated or avoided, they rarely undertake an active, detailed and open-minded exploration of how industry policies could improve national economic welfare. The tendency for rationalists to simply assume that industry policy reduces economic welfare is an approach to economics lacking in imagination, creativity and intellectual rigour, particularly as large parts of the industrialised world engage in active industry policies, many of which appear to advance economic prosperity. This thesis seeks to make a contribution to re-opening Australia's economic debate. Instead of a constant recitation of the 'no industry policy' prescription, it is hoped journalists, economists, bureaucrats, political parties and tertiary economics lecturers could refocus attention on the critical 'what policy' question.

Of course, policies focused on innovation are not all that government can do to foster international competitiveness. Firms throughout the economy would benefit from a range of other policies to foster a sound business climate, including: reform of the tax system so that it fosters productive business investment; further tariff reform; implementation of competition and privatisation, where appropriate, in Australia's infrastructure sectors; prudent macroeconomic policy; regulation reform; and policies to encourage national savings.

However, while other factors are important determinants of national competitiveness, this thesis focuses on innovation because: it is the most important factor in creating national competitive advantage; and, the failure of the rationalist paradigm to foster the creation of an innovation-driven economy is the main factor explaining its limited economic success.

Situating the Thesis

While the approach outlined in this thesis may have most in common with new growth theory, the thesis does not seek to strongly align itself with any particular theoretical perspective. Rather, the thesis has a strongly practical orientation. The approach attempted in the thesis is to be guided by the empirical evidence in each policy area, rather than recommend approaches pre-determined by rigid adherence to one theoretical perspective. The result is that, in some areas, market-based policies are advocated, while in others, strategic industry policies are viewed as important in improving economic welfare. The primary focus of this thesis is on the application of policy in practice, a matter that can be insufficiently addressed in discussion of philosophy or economic theory.

The thesis seeks to find a niche less than fully explored within the Australian critiques of economic rationalism implemented under Labor. The thesis analyses in detail several key components of the economic rationalist policy agenda, critiques the overall approach adopted by rationalism and outlines an alternative economic policy agenda. While many of the books and articles of the period examined

elements of the rationalist approach, few analysed its practical application in such a range of areas, and, in particular, few attempted such a comprehensive critique of the capacity of the rationalist paradigm to produce an innovation-driven economy. Further, unlike many of the critiques of the period, this thesis has the advantage of historical perspective.

Several of the critiques in the period touched on industry policy, but did not attempt a sustained critique of rationalist *economics*. For example, *The Trouble With Economic Rationalism*¹⁸ made some sound criticisms, but most were outside the topic of competitive advantage and employment creation. Additionally, the chapters lacked detail, averaging only eight pages in length. Similarly, *Markets, Morals and Manifestos*¹⁹ made a contribution, but only included one short chapter on industry policy. *Beyond the Market*²⁰ was also a compilation of chapters by different authors on disparate topics.

Two books with much in common with this thesis were *Shutdown*²¹ and *Australian Industry: What Policy?*,²² which covered many of the key issues of industry policy and provided both solid criticism and economic alternatives. However, again, these books were a compilation of chapters from different authors on different topics, and the latter included contributions in support of rationalist economics. As Jenny Stewart wrote of the critiques of rationalism in the period, more could have been done to analyse the weaknesses of rationalist policies and to provide a credible alternative.²³

Stewart's *The Lie of the Level Playing Field*²⁴ effectively analysed many of the weaknesses of the rationalist approach and outlined alternatives for a modern industry policy. There are, however, several differences in emphasis between Stewart's book and this thesis, such as the detail provided in this thesis on free market infrastructure reforms and small government policy, as well as significant differences in emphasis on alternative policy prescriptions. Most particularly, whereas Stewart outlines suitable industry policy approaches in a broad range of areas, admittedly including policies to encourage innovation, this thesis focuses more narrowly, but in significant depth, on those industry policies that could help to create an innovation-driven economy.

¹⁸ Horne, Donald (ed.), *The Trouble With Economic Rationalism*, Scribe Publications, Newham, Victoria, 1992.

¹⁹ Peter Vintila, John Phillipmore & Peter Newman (eds), *Markets, Morals and Manifestos: Fightback! and the Politics of Economic Rationalism in the 1990s*, Institute for Science and Technology Policy, Murdoch University, Murdoch, Western Australia, 1992.

²⁰ Stuart Rees, Gordon Rodley & Frank Stilwell (eds), *Beyond the Market: Alternatives to Economic Rationalism*, Pluto Press, Leichhardt, New South Wales, 1993.

²¹ John Carroll & Robert Manne (eds), *Shutdown: The Failure of Economic Rationalism and How to Rescue Australia*, Text Publishing Company, Melbourne, 1992.

²² Michael Costa and Michael Easson (eds), *Australian Industry: What Policy?*, Pluto Press in Association with the Lloyd Ross Forum of the Labor Council of New South Wales, Leichhardt, New South Wales, 1991.

²³ Jenny Stewart, *The Lie of the Level Playing Field: Industry Policy and Australia's Future*, Text Publishing, Melbourne, 1994, p.4.

²⁴ Jenny Stewart, *The Lie of the Level Playing Field: Industry Policy and Australia's Future*, Text Publishing, Melbourne, 1994.

This thesis also differs from many of the social science critiques of rationalism, which have focused primarily on the negative social effects of rationalist policies. This thesis attacks rationalism on its 'own turf', namely economics, the area which sustains its influence on government policy. Rationalist policies are likely to be continued until Australia's elites are convinced that they are not the key to maximising economic performance.

This thesis also starts from the premise that writers who only ever critique are doing a valuable task, but are ultimately leaving their task only half done. Fostering economic and social change requires that one not only deconstructs and critiques, but also constructs an alternative approach for progress. As Daly writes:

The task is to expose economic rationalism for what it is - an approach to economic policy which has shaky theoretical foundations and demonstrably dangerous consequences - and to counter it with positive alternative economic strategies.²⁵

Australian economic rationalists, such as Costa, Duffy and Warby, have argued that their critics are unworthy, while they fail to provide alternative economic policies that can improve economic welfare beyond a market allocation of resources.²⁶ While this is untrue in terms of international literature,²⁷ it is true that more Australian alternatives could have been forthcoming. In part two, a range of policies that could contribute to Australia achieving national competitive advantage through innovation are outlined.

²⁵ Maurie Daly, ch.5 'No economy is an island' in Stuart Rees, Gordon Rodley & Frank Stilwell (eds), op. cit., pp.72-90 at p.201.

²⁶ Michael Costa & Mark Duffy, ch.12 'Labor and economic rationalism' in Chris James, Chris Jones & Andrew Norton (eds), op. cit., pp.121-131 at p.130; and Michael Warby, ch.13 'Scapegoating and moral panic: Political reality and public policy versus anti-rationalism' in Chris James, Chris Jones & Andrew Norton (eds), op. cit., pp.132-142 at p.141.

²⁷ For example, see Michael E. Porter, *The Competitive Advantage of Nations*, The Free Press, New York, USA, 1990.

Part One: Free Market Reforms

Rationalists generally assume that if resources are allocated by the market, they are allocated with optimum efficiency, leading to maximum economic and employment growth. In part one, three of the key rationalist policies implemented in the period are examined, namely tariff cuts (chapter one), free market infrastructure reform (chapter two) and small government policies (chapter three). Of course, rationalist policies were also implemented in other areas, most notably in deregulating the financial sector, reducing wage levels and commencing the deregulation of the labour market. Chapter four concludes part one by examining the progress made by rationalist policies in restructuring the economy, propelling employment growth and advancing national competitiveness. The argument advanced at its broadest is that rationalist policies did bring net benefits in this regard, but the benefits were only moderate, and were associated with considerable structural dislocation.

Chapter One: Tariff Reform

Introduction

This thesis examines whether rationalist free market policies are effective in generating employment, restructuring the economy and creating national competitive advantage. This chapter tests the utility of free market policies as applied in the 1988-1996 tariff program.

The belief in free markets underpins the rationalist enthusiasm for free trade. Rationalists repeatedly claim that tariff cuts will reduce the allocation of resources going to the least efficient industries, and increase the allocation of resources going to the most efficient industries, thereby improving Australia's industry and export structure, and producing an increase in gross domestic product (GDP) and employment.²⁸ The assumption underlying this 'principle' is that any government policy that alters resource allocation leads to an allocation of resources which encourages inefficient industries and therefore sub-optimal economic and employment growth. This assertion collapses to the extremely simple maxim: 'Let resources be allocated by the market in order to attain optimal efficiency and therefore optimal economic and employment growth.' 'Efficient' is directly and automatically equated with 'allocation of resources by the market', amazingly, without adequate empirical substantiation.

In line with this simple logic, numerous rationalists, such as Ross Garnaut, advocated the removal of all protection.²⁹ Some rationalists argued the point with much certainty, as typified by Anderson's belief in '...the logical conclusion of zero tariffs...'³⁰ Similarly, Gregory and Pincus wrote: 'The imposition of the tariff reduces welfare. It imposes a production and consumption cost on the community.'³¹

The May 1988 Economic Statement planned to reduce average effective assistance from 19 to 13 per cent between May 1988 and the mid-1990s.³² The March 1991 Statement involved reducing the general level of manufacturing assistance from 10 and 15 per cent in 1992 to 5 per cent by 1996.³³ The average effective rate for

²⁸ Industry Commission, *Annual Report 1990-91*, Australian Government Publishing Service, Canberra, 1991, p.227,228; Industry Assistance Commission, 'The commission procedures: A paper prepared for the committee to advise on policies for manufacturing' in Committee to Advise on Policies for Manufacturing Industry, *Policies for Development of Manufacturing Industry: A Green Paper: Volume 3: Commissioned Studies*, Australian Government Publishing Service, Canberra, 1975, pp.64-67 at p.64; and Kym Anderson & Ross Garnaut, *Australian Protectionism: Extent, Causes and Effects*, Allen and Unwin, Sydney, 1987, p.10.

²⁹ Free trade by 2000 is recommended in Ross Garnaut, *Australia and the Northeast Asian Ascendancy: Report to the Prime Minister and the Minister for Foreign Affairs and Trade*, Australian Government Publishing Service, Canberra, 1989, p.222.

³⁰ Kym Anderson, 'International trade and Australian protectionism' in Stephen King & Peter Lloyd (eds), *Economic Rationalism: Dead End or Way Forward?*, Allen and Unwin, St Leonards, New South Wales, 1993, pp.108-126 at p.121.

³¹ R.G. Gregory & J.J. Pincus, ch.6, 'Industry assistance' in L.R. Webb & R.H. Allan (eds), *Industrial Economics: Australian Studies*, George Allen and Unwin, Sydney, 1982, p.113-162 at p.114.

³² Ross Garnaut, *Australia and the Northeast Asian Ascendancy*, op. cit., p.209.

³³ Industry Commission, *Annual Report 1990-91*, op. cit., p.69.

manufacturing sectors, bar textiles, clothing and footwear (TCF) and passenger motor vehicles (PMV), would fall from 13 to 3 per cent between 1987-88 and 1996.³⁴

These changes mark a historic shift in policy. From 1930 and 1980, Australia's manufacturing was the second most protected in the industrialised world,³⁵ protection had support from both major parties, the press, the Tariff Board and many economists³⁶ and it was thought to promote high wages, economic and employment growth, and industrialisation.³⁷ Thus, Australia moved from being a highly protectionist nation for 70 years - which left the average effective rate of assistance for manufacturing at 35 per cent in 1972-73 - to virtually a free trade nation, with an average effective rate of assistance for manufacturing at around 6 per cent by 1996.³⁸

This chapter has three sections. The first section argues that Australia's tariff policy was outdated and counterproductive by 1960, let alone by the 1980s. Reform was therefore justified. The second section highlights the benefits of tariff reform, arguing that it appears to have reduced costs, improved the composition of trade and increased the focus on workplace performance. The third section analyses the limitations and weaknesses of tariff reform, arguing that tariff cuts, while useful, may have produced only mild benefits in terms of restructuring, growth and international competitiveness.

1. Long-term High Protection Policies Impeded Restructuring, Growth and Competitiveness

As numerous authors have argued, Australia's protectionist policy was initially a useful strategy. It assisted the nation to industrialise, grow, employ and diversify its industry base.³⁹ While they debate the effect of tariffs on overall growth, even rationalists like Anderson and Garnaut admit tariffs were central to the industrialisation of Australia:

³⁴ Industry Commission, *Annual Report 1991-92*, Australian Government Publishing Service, Canberra, 1992, p.270.

³⁵ Kym Anderson & Ross Garnaut, *op. cit.*, p.1,43-45.

³⁶ For analysis of this era, as well as the beginnings of the free trade resurgence among these groups, see: Leon Glezer, *Tariff Politics: Australian Policy Making: 1960-1980*, Melbourne University Press, Carlton, Victoria, 1982; and John Warhurst, *Jobs or Dogma? The Industries Assistance Commission and Australian Politics*, University of Queensland Press, St Lucia, Queensland, 1982.

³⁷ Kym Anderson & Ross Garnaut, *op. cit.*, p.28.

³⁸ Industry Commission, *Annual Report 1990-91*, *op. cit.*, p.2.

³⁹ Greg Crough & Ted Wheelwright, *Australia: A Client State*, Penguin Books, Ringwood, Victoria, 1982, p.86; Randall G. Stewart, ch.6 'Industry policy' in Christine Jennett & Randal G. Stewart (eds), *Hawke and Australian Public Policy: Consensus and Restructuring*, MacMillan, South Melbourne, Victoria, 1990, pp.105-136 at p.105; K. Sheridan & P. Chapman, ch.2 'Australia's economic achievement - Comparisons with Japan' in Kyoko Sheridan (ed), *op. cit.*, pp.5-26 at p.21,22; P. Chapman and K. Sheridan, ch.3 'Foreign capital and the Australian economy' in Kyoko Sheridan (ed.), *op. cit.*, pp.27-50 at p.32,33; Paul Chapman, ch.3 'Australian industry - Surely not "no policy"' in Michael Costa & Michael Easson (eds), *Australian Industry: What Policy?*, Pluto Press in Association with the Lloyd Ross Forum of the Labor Council of New South Wales, Leichhardt, New South Wales, 1991, pp.69-96 at p.73,77,78; Peter Ewer, Winton Higgins & Annette Stevens, *Unions and the Future of Australian Manufacturing*, Allen and Unwin, Sydney, 1987, p.10; Michael Webber, 'Garnaut: The implications of Northeast Asia for Australian industry', *Australian Journal of International Affairs*, vol.44, no.1, April 1990, pp.39-45 at p.39-40; John Warhurst & Jenny Stewart, ch.7 'Manufacturing industry policies', in Brian W. Head & Allan Patience (eds), *From Fraser to Hawke: Australian Public Policy in the 1980s*, Longman Cheshire, Melbourne, 1989, pp.159-176 at p.159.

Australia's protection policy certainly achieved one of its objectives, which was to boost manufacturing production and employment...[The industry's share of GDP was 10 per cent in 1900]. Between then and 1970 value-added grew at least 50 per cent faster in manufacturing than in the rest of the economy, and, at least up to the 1940s, employment growth in manufacturing was almost double that in other sectors... Thus by the 1960s manufacturing accounted for almost 30 per cent of Australia's GDP and employment... At the turn of the century, manufacturing was only half as important to Australia as to other high-income countries. However, by the 1960s Australia had virtually eliminated this difference.⁴⁰

In a time before the global economy, tariffs provided a significant barrier to imports. This encouraged foreign and local capital to invest in manufacturing to serve the protected local market. Australia developed an industrial base that included iron, steel, heavy engineering, shipbuilding, TCF, white goods and eventually, a car industry.⁴¹ The need to diversify the economy had been made clear during the 1930s depression, when Australia's vulnerability to world commodity prices resulted in a particularly severe decline in GDP.⁴² Tariffs facilitated a new area of expansion after the pastoral and mining industries had become mature markets.⁴³

Tariff protection appeared to increase growth and employment initially. The key policy mistake was the failure to refocus the strategy after an industrial base had been achieved. Australia's industrial strategy could have usefully focused on shifting production to more elaborate, value-added products, and to capitalising on the world boom in manufacturing exports that was to ensue in the four decades from 1960. Australia's long-term protection policy appeared to be detrimental to growth, restructuring and international competitiveness when Labor took power. The general thrust of Labor's tariff reduction strategy was therefore warranted.

Protection weakened economic performance in a number of ways.

Tariffs were administered in such a way as to prevent structural change. Tariffs were granted to a sector according to the 'made to measure' rule, which involved granting enough protection to enable the sector to maintain its market share, production and employment levels.⁴⁴ When a sector found that imported products were threatening jobs and growth in their sector, they would lobby the Federal Government, who would send a reference to the Tariff Board to review the sectors' protection. Where large amounts of employment and investment were in jeopardy, it was general practice of the Tariff Board to grant an increase in tariffs, to a point that would allow the industry to remain reasonably profitable.⁴⁵ Hence, the era has become known as the 'made-to-measure' tariff era.

⁴⁰ Kym Anderson & Ross Garnaut, op. cit., p.12.

⁴¹ Randal G. Stewart, op. cit., p.105.

⁴² Greg Crough & Ted Wheelwright, op. cit., p.88.

⁴³ Peter Ewer, Winton Higgins & Annette Stevens, op. cit., p.10.

⁴⁴ Committee to Advise on Policies for Manufacturing Industry, *Policies for Development of Manufacturing Industry: A Green Paper: Volume 1: Report to the Prime Minister by the Committee to Advise on Policies for Manufacturing Industry*, Australian Government Publishing Service, Canberra, 1975, p.29,30.

⁴⁵ Leon Glezer, op. cit., p.33; and Kym Anderson & Ross Garnaut, op. cit., p.53,60.

Structural change - where it involves constantly redistributing the nation's resources to areas of competitive advantage and to areas experiencing strong growth in world trade - helps to maximise growth and exports. Studies of numerous nations confirm a relationship between structural change and economic growth.⁴⁶ 'Made to measure' tariff policy had the effect of holding resources within a particular structure, rather than allowing them to flow to areas of greater competitiveness, and thereby lowered growth. Where the economy is near full employment, as it generally was between 1945 and 1973, declining sectors need to be allowed to contract, so that competitive sectors can access the resources needed to grow. By preventing the expansion of competitive sectors, the tariff era may have contributed to the decline in Australia's per capita income from fourth in the world in 1960 to 16th in 1987.⁴⁷

The 'made to measure' approach also had the effect of 'picking losers', as it provided ever higher assistance to Australia's least competitive sectors, while more competitive sectors received little or no assistance.⁴⁸ This is the very reverse of sound industry policy, which aims to foster structural change by creating competitive advantage in strategic, growth industries.

Most particularly, 'made to measure' tariff policies may have impeded restructuring towards sectors achieving high world trade growth, particularly from approximately 1960 onward. Australia's tariff policies involved expending large amounts of scarce resources 'propping up' increasingly less competitive sectors, particularly low value-added sectors. This was just at the time when newly industrialising nations in Asia were establishing competitive advantage in such areas, and the industrialised nations were responding by restructuring their manufacturing sectors toward higher value-added products. Australia's tariff policy ensured it missed out on much of the great expansion in high value-added manufacturing exports in the period from 1960.⁴⁹

Australia was the only industrialised nation not to increase its manufactured exports to GDP ratio (from 13.5 per cent of GDP) in the three decades to the mid-1980s. Largely as a consequence, Australia's exports to GDP ratio fell from 23.2 to 14.5 per cent between 1949-50 and 1984-85, at the time when other nations greatly expanded their exports, chiefly through expanding their manufactured exports to GDP ratio.⁵⁰ Between 1960 and 1987, world trade grew 6 per cent per annum in real terms, but Australia's failure to fully integrate its manufacturing industry in such growth meant that its share of world trade fell from 1.7 to 1.1 per cent in the period.⁵¹

⁴⁶ Australian Industries Assistance Commission, *Structural Change in Australia*, Australian Government Publishing Service, Canberra, 1977, p.7,14,15,30,31.

⁴⁷ Report of the Committee for Review of Export Market Development Assistance, *Australian Exports: Performance Obstacles and Issues of Assistance: Report of the Committee for Review of Export Market Development Assistance*, Australian Government Publishing Service, Canberra, 1989, p.8.

⁴⁸ Jenny Stewart, *The Lie of the Level Playing Field: Industry Policy and Australia's Future*, Text Publishing, Melbourne, 1994, p.75.

⁴⁹ This is essentially the argument made by Peter Ewer, Winton Higgins & Annette Stevens, op. cit., at p.38,39.

⁵⁰ Winton Higgins, ch.7 'Missing the boat: Labor and industry in the eighties' in Brian Galligan & Gwyneth (eds), *Business and Government Under Labor*, Longmann Cheshire, Melbourne, 1991, pp.102-117 at p.105.

⁵¹ Report of the Committee for Review of Export Market Development Assistance, op. cit., p.8-10.

By attracting numerous entrants into manufacturing sectors, 'protection all round' also produced a manufacturing industry made up of numerous fragmented, often unrelated, small scale firms and sectors, each performing relatively poorly, with none becoming world competitive.⁵² For example, in the car sector, the application of tariffs, import licensing and local content provisions resulted in 14 companies producing numerous models in Australia, all of which were being produced in numbers far beneath that needed to be internationally competitive.⁵³ Throughout manufacturing, such fragmented sectoral structures were commonplace. It was inevitable that such underscale firms would eventually be swamped by more competitive overseas producers.⁵⁴

Protectionism also fails because it does not address the keys to achieving competitive advantage in manufacturing, such as establishing excellence in R&D or export marketing. In effect, protection involves hiding from competitive weaknesses, while doing nothing to resolve them. Indeed, by shielding producers from international competition, protection allows and encourages firms to become complacent. After decades of protection, much of Australia's manufacturing had uncompetitive quality, design, productivity, management, work practices, R&D, marketing and work organisation, as well as outdated technology and production techniques.⁵⁵ To be effective, industry policies must be aimed at producing structural adjustment and competitiveness. Unfortunately, long-term protection facilitated industrial retardation.

Tariffs also hampered competitiveness by increasing input costs.⁵⁶ This occurred because, firstly, manufacturers, in effect, had to pay for the tariff on imported inputs to their production, and secondly, because shielding local manufacturers from international competition brought poor performance and higher cost products.

These negative effects of tariffs constrained export growth. In particular, by raising input costs, tariffs subjected nearly all manufacturing exports to negative effective assistance prior to 1977.⁵⁷ Tariffs also constrained export growth in other ways. They focused firms inward on the domestic market.⁵⁸ Tariffs also promoted a manufacturing structure dominated by multinational firms producing for the

⁵² Philip Yetton, Jeremy Davis & Peter Swan, *Going International: Export Myths and Strategic Realities: Report to the Australian Manufacturing Council*, Australian Graduate School of Management Ltd, Kensington, New South Wales, 1992, p.69.

⁵³ Peter Ewer, Winton Higgins & Annette Stevens, *op. cit.*, p.12.

⁵⁴ Jenny Stewart, *The Lie of the Level Playing Field*, *op. cit.*, p.76.

⁵⁵ Pappas, Carter, Evans & Koop/Telesis, *The Global Challenge: Australian Manufacturing in the 1990s: Final Report of the Pappas, Carter, Evans and Koop/Telesis Study*, Australian Manufacturing Council, Melbourne, 1990, p.48; ACTU/TDC Mission to Western Europe, *Australia Reconstructed: ACTU/TDC Mission to Western Europe: A Report by the Mission Members to the ACTU and the TDC*, Australian Government Publishing Service, Canberra, 1987, p.90,91; and Report of the Committee for Review of Export Market Development Assistance, *op. cit.*, p.31; and Winton Higgins, *op. cit.*, p.104.

⁵⁶ Robert J. L. Hawke, Paul Keating, John Button & Department of Prime Minister and Cabinet, *Building a Competitive Australia: Statements by Prime Minister, Bob Hawke, Treasurer, Paul Keating and Industry Minister, John Button*, Australian Government Publishing Service, Canberra, 1991, pp.1.1-1.23 at p.1.5.

⁵⁷ Kym Anderson & Ross Garnaut, *op. cit.*, p.62.

⁵⁸ Ralph Evans, ch.1 'The Global Challenge report and the clash of paradigms' in Michael Costa & Michael Easson (eds), *op. cit.*, pp.15-46 at p.36.

domestic market only. Many Australian subsidiaries were prevented from developing export markets by the policies of their foreign parents.⁵⁹ The discouragement of exports was a key weakness of protectionist policies because competing on export markets against the world's best spurs firms to improve their performance.

While all tariff policies produce some negative (as well as some positive) outcomes, Australian policy makers implemented protection policies poorly, thereby further worsening economic outcomes.

A central tenet of any thoughtful industry policy is to seek to create an industry structure capable of achieving exports, growth and international competitiveness. State and Federal Governments took little or no interest in the pattern of industrial development that emerged under tariffs.⁶⁰ They sought to shift the development focus from primary to secondary industry, but didn't seek to target sectors beyond this. No attempt was made to consider inter-industry linkages, developments in world demand for products, nor the relative competitiveness of various sectors. Policymaking was ad hoc, amateur and sometimes contradictory. It was made without reference to any overall strategy and without any vision of the industry structure Australia needed to maximise growth, exports and international competitiveness.⁶¹

As the Crawford report noted, Australia's tariff structure by the 1970s was the result of a series of historical accidents, not any overall planning.⁶² Many of the tariff rates had simply remained in place from as far back as the rises imposed by the Scullin Government in the 1930s depression.⁶³ On top of the structure applying during the Scullin era, tariffs were raised for any sector that could demonstrate that imports were threatening jobs in their sector. The resulting lack of coherence was further worsened by the fact that the States ran their own industrial development programs without any reference to each other. This reinforced the development of an inefficient, fragmented and dispersed industrial structure.⁶⁴

Further, Federal Governments never made protection conditional on manufacturers improving their performance and export orientation.⁶⁵ This was a wasted opportunity because, in return for tariff assistance, the Federal Government could have required firms to improve their performance and build expertise in vital competencies such as R&D and export marketing.

⁵⁹ *ibid.*, p.22.

⁶⁰ Leon Glezer, *op. cit.*, p.26.

⁶¹ ACTU/TDC Mission to Western Europe, *op. cit.*, p.89; and P. Chapman and K. Sheridan, ch.2 'Foreign capital and the Australian economy' in Kyoko Sheridan (ed.), *op. cit.*, pp.27-50 at p.40.

⁶² John Crawford, Brian Inglis, R.J.L. Hawke & N.S. Currie, *Study Group on Structural Adjustment: Report*, Australian Government Publishing Service, Canberra, 1979, p.10.21.

⁶³ John Warhurst & Jenny Stewart, *op. cit.*, p.160.

⁶⁴ Greg Crough & Ted Wheelwright, *op. cit.*, p.103; and Peter Ewer, Winton Higgins & Annette Stevens, *op. cit.*, p.17.

⁶⁵ Metal Trades Unions, *Policy for Industry Development and More Jobs*, Metal Trades Unions, Melbourne, 1984, p.54.

Additionally, protectionism was combined with active encouragement of foreign investment and little focus on developing indigenous firms. This approach resulted in foreign multinationals owning much of the manufacturing industry, particularly in tradeable and high technology areas. This had damaging long-term consequences. In particular, it meant Australia did not develop competence in many of the capabilities necessary for achieving competitive advantage on world markets. Foreign multinationals tended to perform such functions in their home nation. For example, little R&D took place in Australia. Firms simply imported technology. In many cases, because the domestic market was protected, foreign firms made little investment in up-to-date production equipment, training or quality assurance programs. Foreign owned firms tended not to export, often because they had already achieved large global sales through exports from their home nation or through multidomestic structures. High foreign investment in high technology fields meant mechanisms for financing startup and growing concerns were not developed. A significant venture and development capital market has not emerged.⁶⁶

In conclusion, these factors indicate that by 1960, let alone 1988, protectionist policies were reducing Australia's capacity to grow, restructure and compete, and a tariff reduction strategy was appropriate.

2. The Importance of Tariff Reform

Tariff cuts appear to have assisted restructuring. As noted above, 'made to measure' tariffs impeded the flow of resources from those sectors in structural decline, such as labour intensive manufactures, to sectors with greater potential for growth, such as ETMs. Tariff cuts can facilitate the release of resources from inefficient firms and sectors for use in more competitive firms and sectors, thereby facilitating restructuring and growth.⁶⁷ Thus, tariff cuts are likely to bring a composition of industry and exports more conducive to growth and employment than the structure brought about by 60 years of protectionism.

Tariff cuts also narrow the difference between the levels of assistance available for local production and for export production, thereby encouraging producers to increasingly focus on exports, not just domestic sales.⁶⁸

Tariff cuts may also reduce input costs. The IC estimated that, in 1989-90, the consumer tax equivalent for the manufacturing sector – a broad measure of the additional amount consumers of final goods pay as a result of assistance to domestic manufacturers – was \$7.6 billion.⁶⁹ Tariff cuts produce cheaper inputs where importers pass on the lower tariff to consumers by lowering their prices. In turn, domestic firms competing in such sectors may respond to this price competition by increasing their efficiency and lowering their prices. These effects produces input

⁶⁶ Jenny Stewart, *The Lie of the Level Playing Field*, op. cit., p.89-93.

⁶⁷ Australian Industries Assistance Commission, op. cit., p.1,2,16,17; and Michael Porter, *The Competitive Advantage of Nations*, The Free Press, New York, USA, 1990, p.5,6.

⁶⁸ John Crawford, Brian Inglis, R.J.L. Hawke, N.S. Currie, op. cit., p.10.10.

⁶⁹ Industry Commission, *Annual Report 1990-91*, op. cit., p.227.

cost reductions for those Australian firms that use these goods to create their products. This improved cost competitiveness can result in increased sales.⁷⁰

Tariff cuts - in conjunction with the float of the Australian dollar and the removal of exchange controls - have also exposed the economy to greater international competition, thereby forcing many firms to become competitive in order to survive against imports.⁷¹ In addition, increased import penetration, and subsequent loss of market share for domestic producers, has forced firms to seek out export markets to ensure their continued survival.⁷²

These impacts of tariff cutting may have produced faster restructuring, and higher economic, employment and export growth, than would have been achieved by a continuation of protectionism.⁷³ In particular, tariff cuts may have facilitated some restructuring of manufacturing toward higher value-added segments. While tariff cuts are likely to have a negative effect on overall manufacturing output, the greatest output falls are concentrated in inefficient firms. Tariff cuts may have led to greater specialisation in production in which Australia can be internationally competitive and export-oriented.⁷⁴ This is why both the Hughes Report⁷⁵ and Ross Garnaut,⁷⁶ as well as various rationalist models,⁷⁷ indicate that tariff reductions will reduce Australia's commodity reliance and increase manufacturing exports. Importantly, these arguments are consistent with - while not proven by - Australia's economic history. From 1988 onward, Australia achieved a useful increase in its exports to GDP ratio, after 3 to 4 decades of tariff protection had coincided with no growth in the exports to GDP ratio. In particular, ETM exports have achieved rapid growth. (These trends are analysed in chapter four).

3. Weaknesses and Limitations of Rationalist Tariff Reform

The Limitations of Tariff Reform

The key limitation of tariff cutting is that it has only a moderate or minor impact on Australia's capacity to compete, restructure and create employment. These goals are dependent primarily on being able to create innovative, sophisticated, high quality products. Such product innovation is dependant on achieving excellence in a range

⁷⁰ This is strongly stressed in free trade theory, as described in R.G. Gregory & J.J. Pincus, op. cit., pp.113-162, at p.116,117.

⁷¹ Industry Commission, *Annual Report 1990-91*, op. cit., p.5.

⁷² McKinsey and Company & the Australian Manufacturing Council Secretariat, *Emerging Exporters: Australia's High Value-Added Manufacturing Exporters: Final Report of the Study by McKinsey & Company and the Australian Manufacturing Council Secretariat to the Australian Manufacturing Council*, Australian Manufacturing Council, Melbourne, 1993, p.37.

⁷³ Philip Yetton, Jeremy Davis & Peter Swan, op. cit., p.51.

⁷⁴ *White Paper on Manufacturing Industry*, Australian Government Publishing Service, Canberra, 1977, p.17,22; John Crawford, Brian Inglis, R.J.L. Hawke & N.S. Currie, op. cit., p.10.1; Philip Yetton, Jeremy Davis & Peter Swan, op. cit., p.48,64,69.

⁷⁵ Report of the Committee for Review of Export Market Development Assistance, op. cit., p.30.

⁷⁶ Ross Garnaut, ch.2 'Trade and industry policy after the Uruguay Round' in Michael Costa & Michael Easson (eds), op. cit., pp.47-68 at p.67,68.

⁷⁷ Philip Yetton, Jeremy Davis & Peter Swan, op. cit., p.53,55.

of capabilities such as R&D, an indigenous capacity to create and deploy advanced technology, education and training, finance, marketing and exporting. Because tariff cutting produces little or no impact on these capabilities, it makes only a modest contribution to restructuring and national competitiveness.⁷⁸

Free traders have long admitted that tariffs have little effect on the overall level of employment.⁷⁹ For example, ORANI model estimates, published in the IC's 1988-89 Annual Report, found that tariff reform would increase employment by a mere 0.1 per cent.⁸⁰ Tariff cuts also have a minimal impact on economic growth. The ORANI model estimated that the 1991 tariff program would only increase GDP by \$1.5 billion in 1988-89 prices.⁸¹

Furthermore, while tariff cuts appear to produce a mild net stimulus to restructuring, particularly by inducing greater specialisation in those areas in manufacturing in which we can be most competitive, some of their effects are not optimal. Tariff cuts are likely to have been of most benefit to agriculture and mining because they reduced the costs of manufacturing inputs and substantially reduced the intersectoral structure of assistance that had long favoured manufactures over mining and agriculture. In the mid 1970s, the average effective rate of assistance for the manufacturing industry was approximately 27 per cent. In comparison, the average effective rate of assistance to agriculture was approximately five per cent,⁸² while the effective rate of assistance for mining had long been negative.⁸³ Thus, free trade policies encourage resources to flow from the manufacturing to the commodity industries overall.⁸⁴ Services also benefit little because, while some may benefit from lower manufacturing input prices, much of the sector is not exposed to international

⁷⁸ This view is put in Pappas, Carter, Evans & Koop/Telesis, op. cit., p.51; Jane Marceau, ch.12 'Industry policy' in Peter Vintila, John Phillimore & Peter Newman, (eds), *Markets, Morals and Manifestos: Fightback! and the Politics of Economic Rationalism in the 1990s*, Institute for Science and Technology Policy, Murdoch University, Murdoch, Western Australia, 1992, pp.139-148 at p.139; and Humphrey McQueen, 'Tariffs are no panacea', *The Weekend Australian*, 13-14 June 1992, p.24. Jenny Stewart, *The Lie of the Level Playing Field*, op. cit., p.271 wrote: 'Both traditional (protection-based) industry policy and subsequent efforts to move away from protection were not well designed to effect the two principal objectives: restructuring industries which had lost their competitiveness, and optimising the opportunities for new businesses to get started and grow.'

⁷⁹ R.G. Gregory & J.J. Pincus, op. cit., p.142.

⁸⁰ Industry Commission, *Annual Report 1989-90*, Australian Government Publishing Service, Canberra, 1990, p.33. Similarly, Philip Yetton, Jeremy Davis & Peter Swan, op. cit., p.55 details results using the ORANI-MINE model, which predicted that assistance reductions would only increase real GDP by 0.6 per cent and employment by 0.3 per cent.

⁸¹ Industry Commission, *Annual Report 1990-91*, Australian Government Publishing Service, Canberra, 1991, p.69.

⁸² James Scholfield Balderstone & the Department of Primary Industry, *Agricultural Policy: Issues and Options for the 1980s: Working Group Report to the Minister for Primary Industry*, Australian Government Publishing Service, Canberra, 1982, p.37,38.

⁸³ Michael Taylor, *The Regional Impact of Changing Levels of Protection in Australian Industries*, Office of Local Government, n.p., 1992, p.3.

⁸⁴ For example, this is the view expressed in: Ralph Evans, ch.1 'The Global Challenge report and the clash of paradigms', op. cit., p.22,23.

competition.⁸⁵ Furthermore, services tied to manufacturing may be adversely affected as manufacturing output declines.⁸⁶

The fact that tariff cuts may primarily benefit commodities, while useful, is not ideal, because such industries are in long run decline and Australia's over-reliance on such industries has underscored our declining economic performance in recent decades. Meanwhile, tariff cuts may produce only mild benefits and some detriment for manufacturing and services, which are the fastest growing areas of world trade and the key to future employment growth.

Further, while tariff cuts may have made a contribution to the strong export growth achieved in the period, it seems likely that other factors, such as a lower dollar, government schemes and the activities of firms, caused the majority of the growth.

Export assistance provided by government appears to have made a strong contribution to facilitating the export growth achieved in the period. For example, the LEK Partnership study found that more than 70 per cent of emerging service exporters used at least one government assistance scheme and more than 9 out of 10 users of government schemes found them useful.⁸⁷ An LEK survey found the following:

Use of Government Programs by Service Exporters

Export Support Program	Aware of Program	Aware, eligible & used program	Helpful to User
Export Market Development Grants	73	98	96
Other Austrade Assistance	54	86	85
150% R&D Tax Concession	50	76	95
National Industry Extension Service	41	66	92
Australian International Development Assistance Bureau	36	65	92
Income Tax Relief Facility	12	59	100
Grants for Industrial R&D	39	56	94
Export Access	27	45	86
EFIC - Credit Insurance	46	44	91
EFIC - Finance	28	28	93
Development Import Finance Facility	21	28	100
Investment Promotion Program	6	27	97
International Trade Enhancement Scheme	27	10	89
Australian Best Practice	11	10	100

Source: LEK Partnership, *Intelligent Exports...and the Silent Revolution in Services*, Australian Trade Commission, Sydney, 1994, p.78.

⁸⁵ Michael Deeley, ch.17 'Manufacturing in the 1990s' in Michael Costa & Michael Easson (eds), op. cit., pp.333-346 at p.334.

⁸⁶ Steven S. Cohen & John Zysman, *Manufacturing Matters: The Myth of the Post-Industrial Economy*, Basic Books Inc., New York, 1987, p.xiii,xiv,1-27. The IC ORANI simulation in Industry Commission, *Annual Report 1988-89*, Australian Government Publishing Service, Canberra, 1990, p.33 found that tariff reform of manufacturing and agriculture assistance would increase mining output by 11.5 per cent, agriculture by 1.3 per cent and services by 0.9 per cent, while manufacturing output would decline by 1.0 per cent.

⁸⁷ LEK Partnership, *Intelligent Exports...and the Silent Revolution in Services*, Australian Trade Commission, Sydney, 1994p.15,78.

Perhaps more significantly, a significant proportion of the export growth achieved in the period can be accounted for from exports fostered by government sectoral schemes, such as: export facilitation in the PMV and TCF sectors; plans for the steel and heavy engineering sectors; accelerated depreciation for ship building; assistance for the medical and scientific equipment sectors; the partnership for development program for the information technology sector; the factor F program for pharmaceuticals; and the offsets program for the aerospace sector. The concentration of export growth in these sectors indicates that government programs were important in facilitating export growth.⁸⁸ Exports fostered by such schemes are noted in the table below.

Exports of Manufacturing Sectors Particularly Assisted by Government

Sector	SITC No.	1995-96 (\$m)	Trend Growth 91-92 to 95-96
Computers & office machines, parts etc	759	1,457.5	25.1
Aircraft and associated equipment	792	710.8	7.9
Telecommunications equipment, nes	764	686.6	19.8
Passenger motor cars	781	557.2	7.8
Other industry-specific machinery	728	458.5	24.9
Motor vehicle parts, etc	784	443.1	8.2
Ships, boats and floating structures	793	433.9	6.9
Iron/steel, primary and semi-finished	672	419.7	13.2
Computers	752	411.1	19.6
Flat-rolled iron/steel, not coated	673	403.1	14.9
Flat-rolled iron/steel, coated	674	391.4	1.8
Civil engineering equipment	723	300.2	16.6
Medicinal and pharmaceutical products	541	223.8	8.4
Iron and steel bars, rods etc.	676	190.0	7.8
Medical instruments and appliances	872	179.7	20.4

Source: Department of Foreign Affairs and Trade, *Composition of Trade Australia 1995-96*, Department of Foreign Affairs and Trade, Canberra, 1996, p.24,25.

Many service exports were also encouraged by government assistance. Tourism, strongly supported by government, accounts for 60 per cent of service exports, while education, which is run primarily by government, contributes more than 10 per cent of service exports.⁸⁹

Tariff cuts also failed to resolve a fundamental problem of Australia's manufacturing industry, namely its lack of large, indigenous, strategic exporting firms. Stewart argued that many firms were unable to export because their loss of market share to imports left insufficient demand to allow firms to reap economies of scale and gain the sales revenue necessary for launching an export drive. Among those firms that have produced exports, the vast majority have only achieved small scale export sales in niche markets.⁹⁰

⁸⁸ Michael Easson 'Sunbeams, cucumbers and industry policy' in Michael Costa & Michael Easson (eds), *op. cit.*, pp.123-150 at p.129-131.

⁸⁹ LEK Partnership, *op. cit.*, 15.

⁹⁰ Jenny Stewart, *The Lie of the Level Playing Field*, *op. cit.*, p.76.

Finally, tariff cuts appear to have, at best, no net effect on the trade balance, and at worst, a mild negative effect. Tariff cuts foster a larger tradeable sector. It is certainly welfare enhancing to import products that Australia is ill suited to producing, while exporting products we are well suited to producing. However, a key aim of Australia's restructuring strategy must also be to increase net exports, so as to wind back the current account constraint on growth. Tariff cuts may increase the trade deficit, at least for the medium-term, as imports rise quickly as tariffs are cut, but the free market restructuring process taking longer to bring export growth. The ORANIMINE model estimates that, even in the long run, tariff cuts increase the trade deficit by 0.2 per cent.⁹¹

The limited benefits produced by tariff cuts do not demonstrate that tariff cutting should not occur. They do, however, show that they should only form one component of a much broader industry policy agenda. Unfortunately, as will be argued and evidenced in remaining chapters, it appears the whole rationalist policy agenda has only a mild impact in fostering restructuring, employment growth and national competitiveness.

The Benefits of Tariff Reform: Less than Rationalists Predicted?

There are a number of reasons to suspect that the benefits of tariff reductions may be less than rationalists predict.

Tariff theory suggests that the full extent of the tariff cut will be passed on in reduced prices because it is based on a perfectly competitive market structure, in which there is no market power to vary price without losing revenue. ORANI assumes output prices are determined in accordance with a competitive market paradigm.⁹² Thus, if the full extent of the reduced tariff on imports is not passed on in lower prices, improvements in restructuring and output will be lower than rationalists predict. This indeed seems to be the case for several reasons.

In most markets, products are not homogenous and competition is not based solely on price. For ETMs and highly sophisticated services, competitive advantage is determined primarily by non-price factors such as quality and innovation. In such markets, prices are determined by what a sufficient number of customers are prepared to pay, not on what the product cost to produce. Indeed, where firms establish a clear competitive advantage over rivals based on such factors, they can charge premium prices. For these products, lowering tariffs will not reduce prices because retailers who charge a lower or higher price will experience a fall in revenue.⁹³

An example of how prices have adjusted in innovation-driven sectors is provided by car sector. The IC noted in their 1990 Car Report that, since the commencement of the

⁹¹ Philip Yetton, Jeremy Davis & Peter Swan, *op. cit.*, p.55.

⁹² Industry Commission, *The Automotive Industry: Report No.5*, Australian Government Publishing Service, Canberra, 1990, p.79,81,146,223-227.

⁹³ John M. Legge, *A Submission to the Senate Enquiry into the Efficacy of Tariff Protection*, Unpublished, 1992, p.10,11.

1984 program, the average price of passenger vehicles increased by more than 14 per cent in real terms.⁹⁴ Holden noted that, between December 1985 and December 1989, despite major tariff cuts, locally produced car prices increased, on average, by 10.2 per cent in real terms, while imported car prices increased, on average, by 16.6 per cent in real terms.⁹⁵

Import prices may also not fall where tariff cuts result in the elimination of local production. In such instances, multinationals in an oligopolistic market could have the market power to charge prices above the competitive market rate.⁹⁶ The presence of local competition can ensure greater price competition than would occur if importers had the market to themselves.⁹⁷ In a submission to the IC Inquiry on PMV tariffs, the Motor Traders Association cited statistics demonstrating that, in product segments where there were local manufacturers, prices tend to be close to the average world market price, whereas in product segments without local production, a major price increase is levied.⁹⁸ This effect could occur in some sectors, although in general, it appears likely that global competition would produce sufficient competition, at least after a period of time, to create significant downward pressure on prices.

Prices may also not fall by the amount predicted for a range of other reasons. Some consumers may not shift their demand to lower priced imports because they may have loyalty to the Australian product, they might fail to detect any price change, or there may be supply constraints on the imported product. Further, domestic manufacturers can only reduce prices in response to greater import price competition to the extent they control their own costs. For many manufacturers, most of their costs are beyond their control, being determined by factors such as taxes and the price of production inputs.⁹⁹ Finally, taxes formerly paid by foreign companies through tariff payments will need to be made up through increased taxes elsewhere as tariffs are reduced, thereby placing upward pressure on prices. The 1991 Statement noted that by 1993-94, tariff cuts would reduce government revenue by \$579 million.¹⁰⁰

Thus, to the extent that these effects prevent the full amount of the reduced tariff to be passed on in lower prices, rationalists have overestimated the amount of restructuring and output increase achieved through tariff cuts. In particular, the restructuring induced by changes in price signals achieved through tariff reform may be minimal. The mild price effects induced by tariff cuts act in an environment

⁹⁴ Industry Commission, *The Automotive Industry*, op. cit., p.28.

⁹⁵ General Motors Holden's Automotive, *Second Submission by General Motors Holden's Automotive to the Industry Commission Inquiry into the Automotive Industry: Response to the Draft Report*, Unpublished, p.35,36.

⁹⁶ *Independent Parliamentary Inquiry Into Tariffs and Industry Development: Final Report*, Unpublished, 1993, p.26.

⁹⁷ General Motors Holden's Automotive, op. cit., p.38,39.

⁹⁸ Motor Trades Association of Australia, *Submission by the Motor Trades Association of Australia to the Industry Commission Inquiry into the Automotive Industry*, Unpublished, 1990, p.10,22-25.

⁹⁹ Toyota Motor Corporation, *Submission to the Industry Commission Inquiry into the Automotive Industry*, Unpublished, 1990, p.2,3.

¹⁰⁰ Robert J. L. Hawke, Paul Keating, John Button & Department of Prime Minister and Cabinet, *Building a Competitive Australia: Statements by Prime Minister, Bob Hawke, Treasurer, Paul Keating and Industry Minister, John Button*, Australian Government Publishing Service, Canberra, 1991, p.4.2.

in which a large number of other factors are causing the prices of a range of goods to increase or decrease in varying degrees. For example, relative prices are constantly being influenced by government policies, the relative price competitiveness of various industries, fluctuations in exchange rates and technological change. This means that the price signals caused by tariff cuts may be largely subsumed by other price effects, meaning tariff cuts may have only a weak effect in promoting restructuring.

Rationalists assume that resources 'released' from tariff dependent sectors will be redeployed in more efficient sectors, leading to rising economic welfare. While this may often happen - at least after a period of dislocation and adjustment - there are a number of instances in which this free trade resource allocation mechanism might break down.

Capital from one firm, for example a clothing plant, may not be reallocated within another sector of the Australian economy, but instead be allocated in the same sector in the same business overseas. This is occurring in two key ways. Firstly, Australian owned firms are closing down local production that formerly served the local market and provided exports to foreign markets. Instead, production is being relocated offshore and then imported back to Australia and/or distributed in foreign nations. The NSW Chamber of Manufactures March 1993 survey found that approximately 5 to 15 per cent of manufacturers had moved offshore or were considering moving offshore, with 12.6 per cent of these because of tariff cuts. In highly tariff dependent sectors, the movement offshore was more considerable. For example, in the clothing and footwear sector, the percentage of firms operating offshore increased from 13 to 21 per cent between 1991 and 1993, while a further 17 per cent were considering moving offshore at that time.¹⁰¹

A second manifestation of this process is that foreign owned multinationals are moving production from Australia to other subsidiaries overseas, a fact especially concerning given the high proportion of foreign multinational corporations in Australia's manufacturing industry.¹⁰² Such firms have large domestic investments in marketing, brand names and distribution, as well as manufacturing, and therefore don't redeploy released resources into other sectors within Australia, but manufacture overseas and then import the product back to the domestic market. For example, when Nissan closed their car plant in Australia in response to falling tariffs, the capital was not re-invested in a more efficient sector in Australia. Of course, the capital was re-invested in another Nissan car plant overseas.¹⁰³

Interestingly, the IC's ORANI model takes no account of such displacement because it has no sector for overseas capital! All resources released are unrealistically assumed to be redeployed in sectors regarded as the most efficient, such as mining

¹⁰¹ State Bank of New South Wales & Chamber of Manufactures of New South Wales, *Survey of Manufacturing Conditions and Future Prospects in N.S.W.: March Quarter 1993*, State Bank of New South Wales & Chamber of Manufactures of New South Wales, Sydney, 1993, p.19-22.

¹⁰² South Australian Manufacturing Advisory Council, *South Australian Industry in the 1990s: A Proposal for Action: Submission to the Commonwealth Government*, Unpublished, 1992, p.15.

¹⁰³ Paul Chapman, ch.3 'Australian industry - Surely not "no policy"' in Michael Costa & Michael Easson (eds), *op. cit.*, pp.69-96 at p.73.

and tourism.¹⁰⁴ Hence, ORANI may overestimate the economic benefits likely to ensue from the tariff cuts.

However, it should be noted that in many such instances, it is low value-added, cost sensitive production that is being moved offshore to lower cost locations. This is often a positive development for Australia, despite the transitional unemployment it creates, because it is the only way some Australian firms can survive. It at least enables profits to be repatriated to Australia, while the people displaced can hopefully be redeployed in sectors in which Australia can be competitive.

The free trade resource allocation mechanism can also break down for other reasons. Tariff cuts can result in resources being left idle, where they make production no longer viable and the resources have no application elsewhere in the economy. This can occur where capital and/or labour is specific to an enterprise, industry and/or region. As Tony Cole, at the time IC Chairman, explained, a plant designed specifically for the motor vehicle industry may not have suitable alternative uses. In such instances, the plant may simply be abandoned, rather than utilised for alternative production.¹⁰⁵ Such output and employment losses are not considered by the ORANI model, which assumes all resources 'released' by tariff cuts are redeployed elsewhere in the economy.

Rationalists may have also overestimated the benefits of tariff cuts because the international 'playing field' is not level. Rationalists, such as Garnaut and the IC, advocate completing the transition to free trade, regardless of the trade and industry policies of nations overseas.¹⁰⁶ Past government reports and numerous academics, industry representatives, journalists and unionists have criticised the unilateral lowering of tariffs in an environment where other nations have substantial tariffs and other industry incentives to attract investment.¹⁰⁷ The inevitable outcome is argued to be a loss of investment, growth and employment to other nations, as well as an increasing deficit on the current account.

In a global economy, removing so called 'distortions' in Australia may not bring optimal resource allocation. To the extent the economy is global rather than national,

¹⁰⁴ Bill Weekes, 'Import controls and the costs of free trade' in John Carroll & Robert Manne (eds), *Shutdown: The Failure of Economic Rationalism and How to Rescue Australia*, Text Publishing Company, Melbourne, 1992, pp.172-183 at p.179.

¹⁰⁵ General Motors Holden's Automotive, op. cit., p.26

¹⁰⁶ Ross Garnaut, ch.2 'Trade and industry policy after the Uruguay Round', op. cit., p.64, 65; and Industry Commission *Annual Report 1990-91*, op. cit., p.4.

¹⁰⁷ John Crawford, Brian Inglis, R.J.L. Hawke & N.S. Currie, op. cit., p.6,20,9,18,9,19; Peter Ewer, Winton Higgins & Annette Stevens, op. cit., p.34; Ian Lowe, *Submission to the Parliamentary Inquiry Into Tariffs and Industry Development*, Unpublished, 1992, p.4; Winton Higgins, op. cit., p.112; Francis G. Castles, 'The ten commandments of comparative industry policy analysis', *Australian Quarterly*, vol.62, no.4, Summer 1990, pp.337-345 at p.339; Joe Camilleri, Peter Christoff, Boris Frankel, Rob Watts & John Wiseman, The Melbourne Economics Group, *New Economic Directions for Australia*, Centre for Australian Social Policy Analysis, Coburg, Victoria, 1989, p.57; Allan Handberg, 'Strategy lacks focus on growth', *The Australian*, 5 May 1994, p.25; South Australian Manufacturing Advisory Council, *Issues in Industry Policy and Prospects for South Australia: Submission to the Independent Parliamentary Inquiry Into Tariffs and Industry Development by the South Australian Manufacturing Advisory Council*, Unpublished, 1992, p.3; Australian Council of Trade Unions, *ACTU Submission Re Economic Statement*, Unpublished, 1992, Appendix 1: 'Charter for Jobs Policy: ACTU Congress September 1991', p.1; and Metal Trades Unions, op. cit., p.183,184.

'distortions' will need to be removed world-wide if tariff cuts are to promote Australia's most competitive industries. This is because - while tariff cuts in Australia should, in theory, encourage the growth of our most efficient sectors - in practice, the growth of such sectors may be constrained by tariffs and more effective forms of assistance provided to such sectors in overseas nations. Such assistance can encourage investors to produce in nations overseas, rather than in Australia.

This argument appears grounded in reality. Australia cut its protection in an international environment of 'new protectionism', the emergence of major trading blocs in Asia, North America and Europe, and latent trade wars.¹⁰⁸ While the General Agreement on Tariffs and Trade (GATT) has cut tariffs, the incidence of non-tariff measures (NTMs) doubled throughout the 1970's and 1980's and affects up to half of world trade.¹⁰⁹ This protectionism has impeded the growth and exports of many of Australia's most competitive firms. A McKinsey survey found that 31 per cent of firms suffered restricted access to Asian markets due to tariffs and other measures. Many found that once exports reached a certain level, it was made clear by Asian Governments that further growth would require the establishment of local production facilities. Local content provisions help enforce this policy.¹¹⁰ An LEK Partnership survey found that 26 per cent of service exporters said trade barriers were one of the major issues constraining the growth of their exports.¹¹¹

The broader industry policy regimes of governments can also play a role in determining investment decisions by Australian and overseas firms. Block argued that Australia lost many investment opportunities and jobs to Asia because of their Governments more comprehensive industry policy regimes.¹¹² These regimes also led to some Australian firms relocating their production offshore. The NSW Chamber of Manufactures survey found that the assistance regimes provided by overseas Governments were the key reason for moving offshore for 58.3 per cent of those firms which moved offshore between 1991 and 1993.¹¹³

What should be the government response in this situation? Re-establishing a high tariff regime would appear counter-productive for the reasons outlined above. However, this debate does suggest that active industry policy of some kind may be needed to achieve strong export growth and competitive advantage in an international environment in which the most dominant high export firms around the world have achieved their position with the aid of strong government backing.

The Weaknesses of Rationalist Tariff Reform

A key weakness of tariff reform is that it appears to produce significant structural displacement, particularly where implemented in recession. As the tax on imports is

¹⁰⁸ Michael Taylor, *op. cit.*, p.1.

¹⁰⁹ Australian Chamber of Manufactures, Bendigo, *Submission to the Independent Inquiry Into Tariffs and Industry Development*, Unpublished, 1992, p.2.

¹¹⁰ McKinsey and Company & the Australian Manufacturing Council Secretariat, *op. cit.*, p.33,54.

¹¹¹ LEK Partnership, *op. cit.*, p.98.

¹¹² Ray Block, 'The ultimate cargo cult', *Australian Business*, vol.11, no.19, 6 March 1991, pp.40-42 at p.41.

¹¹³ State Bank of New South Wales & Chamber of Manufactures of New South Wales, *op. cit.*, p.22.

reduced, importers become more price competitive against Australian manufacturers and increase their market share at the expense of Australian producers. Some Australian producers contract, others are destroyed and others decide to relocate their production offshore where wage, tax and regulation burdens are lower. In all three cases, Australian jobs are lost.

While free trade advocates in the past had always admitted that tariff cuts did bring dislocation (but that resources would be deployed in more efficient firms, producing rising economic welfare), numerous rationalist writers in the period argued that tariff cuts had little or no gross negative impact on employment, even during the recession.¹¹⁴ A more credible, yet still questionable claim was made by the IC, which argued that tariff cuts increased net employment, even during the recession.¹¹⁵ Then IC Chairman Bill Scales even called for an acceleration of the tariff program during the trough of the recession.¹¹⁶

Economics textbooks, driven by a comparative static methodology, often do not address the dynamic process of adjustment and its associated decline in jobs, firms and plants.¹¹⁷ Similarly, the projections of the IC's ORANI model refer only to the long-term and '...do not, therefore, purport to encapsulate the costs of adjustment to lower tariffs...'¹¹⁸ such as an initial loss of employment, output and government revenue. These projections assume that resources displaced have been redeployed in sectors which give the greatest return on investment, meaning protection cuts are always shown to increase employment.¹¹⁹ Of course, the results of such models are the simple outcome of the assumptions 'keyed in' and provide no evidence or reasoning that the benefits claimed to ensue will actually arise.¹²⁰

¹¹⁴ Des Moore, ch.1 'Condemning the cure: The recession and economic rationalism' in Chris Jones, Chris James & Andrew Norton (eds), *A Defence of Economic Rationalism*, Allen and Unwin, St Leonards, New South Wales, 1993, pp.3-12 at p.3,6; Max Walsh, ch.2 'The demise of protectionism' in Chris Jones, Chris James & Andrew Norton (eds), op. cit., pp.13-20 at p.15; Stephen Shepherd, 'Manufacturing', pp.88-92 in ch.8 'Economic rationalism and Australian business' in Chris James, Chris Jones and Andrew Norton (eds), op. cit., pp.78-92 at p.89; Ralph Evans, 'Mining' pp.79-83 in ch.8 'Economic rationalism and Australian business' in Chris Jones, Chris James & Andrew Norton (eds), op. cit., pp.78-92 at p.82,83; Ross Garnaut - Comments on 'Export or die' - *Lateline* - Aired on ABC-TV, 10.30-11.05pm, 21 April 1994; Richard Blandy, 'Economic rationalism and prosperity' in Stephen King & Peter Lloyd (eds), op. cit., pp.28-36 at p.29; Michael Warby, ch.13 'Scapegoating and moral panic: Political reality and public policy versus anti-rationalism' in Chris Jones, Chris James & Andrew Norton (eds), op. cit., pp.132-142 at p.134; and Kym Anderson 'International trade and Australian protectionism', op. cit., p.108.

¹¹⁵ Industry Commission, *Annual Report 1991-92*, op. cit., p.3,4,83.

¹¹⁶ Tom Dusevic, 'Accelerate tariff cuts: Scales', *The Weekend Australian*, 26-27 September 1992, p.4.

¹¹⁷ Philip Yetton, Jeremy Davis & Peter Swan, op. cit., p.70.

¹¹⁸ Industry Commission, *The Automotive Industry*, op. cit., p.144.

¹¹⁹ Bill Weekes, op. cit., pp.172-183 at p.179.

¹²⁰ For example, Industry Commission, *The Automotive Industry*, op. cit., p.144 notes that the ORANI model assumes that any assistance reduces growth because '...assistance to one industry will invariably impose more than offsetting costs on other economic activities in the economy so that overall community welfare is reduced. Similarly, Access Economics, *The Origins of High Unemployment: A Report for the Office of EPAC by Access Economics in Economic Planning Advisory Council, Origins of the 1990-91 Recession in Australia: Two Papers Prepared for the Office of EPAC - Background Paper No.18*, Australian Government Publishing Service, Canberra, 1992, pp.51-68 at p.67 notes that the AEM model concluded free market reform had caused negligible unemployment, yet as the study itself states: 'Tariff reductions have only a marginal effect on unemployment in the AEM model.'

While comprehensive analysis will not be attempted here, there is evidence that the 1988 to 1996 tariff program did bring significant structural dislocation. Before commencing, it is acknowledged that the recession had many causes. Three main causes appeared to be: a world recession; the boom and bust cycle brought on by financial deregulation; and the fact that monetary policy was too loose for too long in the mid-1980s and then excessively tight for too long at the end of the decade. It is also acknowledged that it is not possible to accurately calculate the exact numbers of people displaced due to tariff cuts because there are so many other factors affecting employment in the economy, such as globalisation, technological change, changes in competitiveness of other nations, and government policies. It appears particularly likely that factors other than tariff cuts were responsible for the great bulk of the dislocation suffered in the period. However, the evidence below, combined with reasoning, suggests that the significant tariff cuts of the period may have brought significant dislocation.

Tariff cuts appear to have had an adverse impact on employment in manufacturing. The rate of dislocation has been the most rapid in the periods of fastest protection cuts. The 25 per cent tariff cut in 1973 appeared to contribute to the dislocation experienced in the period 1973-74 to 1975-76. Manufacturing employment fell from 1,338,400 in 1973-74 to 1,245,200 in 1974-75 and 1,200,400 in 1975-76.¹²¹ By June 1975, manufacturing employment had fallen 146,000 below its trend level, which was 63 per cent of all the employment reduction below trend levels.¹²² While this employment contraction had many effects, including a wages boom, a world recession, rising taxation and a sharp appreciation in the dollar, the magnitude of the employment decline and its concentration in manufacturing suggests that the large tariff cut may have caused some of the dislocation.

Manufacturing employment has suffered during the Labor Government's tariff reform program, which reduced the average effective rate of assistance to manufacturing, bar TCF and PMV, from 13 to three per cent between 1987-88 to 1996.¹²³ Australian Bureau of Statistics (ABS) quarterly, seasonally adjusted figures show that manufacturing employment peaked at 1,221,400 in May 1989, before steadily declining to 1,082,000 in August 1991, then remaining low until a trough of 1,061,500 in August 1993. At November 1995, manufacturing employment remained at 1,113,200 or more than 100,000 below the May 1989 peak. In that same period, total employment increased by nearly 610,000.¹²⁴ Such manufacturing employment levels also compare to the 1,338,400 employed in manufacturing in 1973-74,¹²⁵

¹²¹ Australian Bureau of Statistics, *Year Book Australia 1977-78*, Australian Bureau of Statistics, Canberra, 1978, p.430.

¹²² R.A. Price, 'The effect of the Government's economic policies on industry, 1973-1975', *The Australian Quarterly*, vol.48, no.2, June 1976, pp.81-94, at p.90.

¹²³ Industry Commission, *Annual Report 1991-92*, op. cit., p.270.

¹²⁴ Australian Bureau of Statistics, *Labour Force Australia 1978-95*, Cat. no.6204.0, p.345-348.

¹²⁵ Australian Bureau of Statistics, *Year Book 1975-76*, Australian Bureau of Statistics, Canberra, 1976, p.727.

meaning that manufacturing employment has fallen by approximately 225,000 since then, whilst the total labour force has almost doubled.¹²⁶

Two studies in the early 1990s, based on survey responses by manufacturing firms themselves, concluded that structural, not cyclical, factors were responsible for the great majority of employment lost in the period.¹²⁷ Structural employment dislocation in manufacturing is also evidenced by the very high rate of long-term unemployed in manufacturing compared with the average industry. The percentage of long-term unemployment among unemployed workers whose last full time job was in manufacturing was 25.5 per cent in 1990, while the corresponding figures in services was commonly a third of this figure.¹²⁸

Much of the dislocation in the period was concentrated in tariff dependent manufacturing sectors, particularly the TCF and PMV sectors. The table below shows that in general, the greater the assistance reductions experienced by a sector, the greater the employment dislocation. Between November 1989 and November 1993, clothing and footwear lost a net 9,300 jobs and transport equipment lost 40,900. The next three highest protected sectors lost a combined net total of 56,600 jobs. By contrast, the remaining sectors, with moderate or low protection, suffered little or no employment losses.

¹²⁶ Australian Bureau of Statistics, *Labour Force Australia 1978-95*, op. cit., p.348; and Australian Bureau of Statistics, *Year Book 1975-76*, op. cit., p.727.

¹²⁷ Bureau of Industry Economics, *Jobs Growth and Decline: Recent Employment Changes in Small and Large Business: Occasional Paper 21*, Australian Government Publishing Service, Canberra, 1994, p.x,31-36,41,42,44,45. At pp.34,35, the BIE note that a 1992 study by McIntosh entitled *The Productivity Drive*, had made similar findings.

¹²⁸ P.N. Junankar and Cezary A. Kapuscinski, 'The incidence of long term unemployment in Australia', *Australian Bulletin of Labour*, vol.17, no.4, December 1991, pp.325-352 at p.339.

Sectoral Dislocation by Level of Assistance Reduction

Sector	Average Effective Assistance		EMPLOYMENT					% [b]/[a]
	87-8	96	11/87	11/89 [a]	11/91	11/93 [b]		
Clothing and Footwear	174	50	85,300	79,800	77,100	76,000	89%	
Transport Equipment	46	12	113,700	130,200	102,600	89,300	69%	
Miscellaneous Manuf's	26	6	77,700	92,800	79,100	75,600	81%	
Other Machinery and Equipment	22	4	159,400	156,800	148,700	128,700	82%	
Fabricated Metal Products	22	5	109,600	128,100	115,700	117,800	92%	
Wood, Wood Products and Furniture	18	4	104,100	112,800	106,000	112,100	99%	
Paper, Paper Products, Printing, Publishing	15	2	135,200	125,500	110,600	122,700	98%	
Chemicals, Petroleum, Coal Products	12	4	60,600	59,400	55,600	60,200	101%	
Basic Metal Products	8	4	70,300	80,200	64,100	73,800	92%	
Food, Beverages and Tobacco	7	2	190,700	185,200	179,600	183,400	99%	
Textiles	5	22	32,800	32,100	29,200	33,700	105%	
Non-metallic mineral products	4	1	46,500	51,900	53,200	48,600	94%	

Source: Michael Taylor, *The Regional Impact of Changing Levels of Protection in Australian Industries*, Office of Local Government, n.p., 1992, p.3; Australian Bureau of Statistics, *Labour Force Australia November 1987*, Cat. no. 6203.0, p.33; Australian Bureau of Statistics, *Labour Force Australia November 1989*, Cat. no. 6203.0, p.27; Australian Bureau of Statistics, *Labour Force Australia November 1991*, Cat. no. 6203.0, p.27; and Australian Bureau of Statistics, *Labour Force Australia November 1993*, Cat. no. 6203.0, p.39. Note that the 11/93 figure for clothing and footwear is for 'knitting, clothing and footwear'.

Analysis to 1996 would have been useful to capture the employment impact over a longer time period. Unfortunately, the Australia and New Zealand Industry Classification system was changed in 1993, meaning that published figures for the industry sectors above were no longer provided by the Australian Bureau of Statistics. However, there is evidence that structural dislocation has persisted. For example, quarterly employment figures show that textiles, clothing, footwear and leather (TCFL) employment fell from a peak of 128,400 in August 1989 to 100,000 in February 1991 and a low of 91,500 in February 1993. After a mild recovery, TCFL employment was just 98,400 in November 1995.¹²⁹

Two factors should be borne in mind when assessing such dislocation. On the one hand, Labor's sectoral plans cushioned the impact of the displacement, helping the most affected sectors to restructure and become export-oriented. Rationalist reform alone may have produced significantly more dislocation. On the other hand, it is likely that much of the displacement was inevitable, particularly in the low value-added part of the TCF sector, due to competition from low tax, low wage nations.¹³⁰

That tariff cuts may have caused significant structural displacement is also evidenced by the labour market performance of the States. At the commencement of the 1988 tariff program, the industry profiles of Australian States could be divided into two distinct categories. In South Australia, Victoria and Tasmania, a significant

¹²⁹ Australian Bureau of Statistics, *Labour Force Australia 1978-95*, Cat. no.6204.0, p.345-348.

¹³⁰ Bill Weekes, *op. cit.*, p.182.

percentage of production is comprised of inward looking, tariff dependent manufacturing. The percentage of manufactures in Gross State Product (GSP) at factor cost in 1987-88 in Victoria, South Australia and Tasmania was 20.2 per cent, 18.3 per cent and 17.0 per cent respectively. By comparison, Queensland and Western Australia had only 13.5 per cent and 11.2 per cent of their GSP at factor cost in manufactures in 1987-88 respectively, and much of this was in sectors receiving little tariff protection. The industry structure of New South Wales lies somewhere between the 'rust belt' and 'free trade' categories. Its manufacturing industry, which comprised 17 per cent of GDP at factor cost in 1987-88,¹³¹ is of significant size, but only pockets of the industry are highly tariff dependent.

The table below shows that among the 'rust belt' States, significant dislocation occurred in manufacturing employment during the period of tariff cuts and recession, which drove total employment down considerably in those States. As shown above, much of the dislocation was concentrated in the most tariff dependent sectors. Total employment had still not made significant recovery near the end of 1995, compared with its pre-recession peak. By contrast, the 'free trade' States suffered only brief and minor dislocation, and achieved considerable employment growth in the period.

Manufacturing and Total Employment by State (in thousands, original figures)

State	8/88	8/89	8/90	8/91	8/92	8/93	8/94	8/95
VIC	400.7	396.5	385.1	359.3	347.7	332.0	337.1	347.0
SA	1,930.5	2,049.1	2,071.3	1,964.0	1,936.1	1,912.5	1,960.6	2,050.6
TAS	103.6	117.4	109.3	102.0	98.6	91.7	110.4	100.4
NSW	617.9	650.6	651.7	626.5	622.5	630.3	642.1	657.3
QLD	28.4	29.6	31.3	28.3	26.8	22.6	23.1	21.9
WA	188.7	195.4	197.6	193.9	193.3	188.8	190.7	195.3
AUSTRALIA	414.0	413.5	392.2	365.5	360.7	369.5	382.4	367.7
	2,494.4	2,588.0	2,613.1	2,589.4	2,572.8	2,544.8	2,634.4	2,751.5
	147.8	165.4	161.5	145.5	156.8	160.7	174.9	184.7
	1,199.3	1,277.5	1,314.4	1,299.7	1,336.2	1,353.7	1,433.7	1,500.3
	85.5	86.4	90.8	72.3	78.1	76.8	82.1	85.9
	712.3	739.5	743.6	732.9	733.0	761.8	793.7	826.2
	1,187.1	1,216.6	1,177.0	1,082.0	1,076.9	1,061.5	1,119.5	1,117.3
	7,353.4	7,715.4	7,808.1	7,629.3	7,617.6	7,621.0	7,885.7	8,217.7

Source: Australian Bureau of Statistics, *Labour Force Australia 1978-95*, Cat. no.6204.0, p.345-348,383-388.

The following table shows employment among the States in seasonally adjusted terms. The table shows that in each of the 'rust belt' States, the employment contraction was deep, the recovery was slow, and employment was not significantly greater than its pre-recession peak at February 1996. By contrast, in the 'free trade' States, the employment contraction was small and brief, and employment at February 1996 was well above its pre-recession peak.

¹³¹ These figures are calculated from the data provided in Australian Bureau of Statistics, *Australian National Accounts: State Accounts 1995-96*, Cat. no.5220.0, p.29-40.

Dislocation By State: Employment (in thousands, seasonally adjusted figures)

State	2/88	2/89	emp peak	2/90	2/91	emp trough	2/92	2/93	2/94	2/95	2/96
VIC	1,931.5	2,016.3	2,183.1 11/89	2094.6	2,029.6	1,915.0 2/93	1,954.4	1915.0	1,943.6	2,035.2	2,078.5
SA	609.8	640.0	659.9 12/90	651.3	654.5	623.9 5/92	626.3	635.4	632.9	655.5	653.6
TAS	189.3	186.5	203.0 11/90	200.2	199.2	188.5 5/92	193.5	189.8	196.6	195.0	203.9
NSW	2,499.9	2,562.6	2,658.2 12/90	2,616.4	2,627.0	2,514.4 4/93	2,596.7	2,538.0	2,618.9	2,718.7	2,791.2
QLD	1,158.5	1,250.9	1,322.3 8/90	1,314.2	1,291.3	1,290.2 5/91	1,327.5	1,349.8	1,406.4	1,491.2	1,524.4
WA	696.0	738.6	754.4 7/90	750.6	736.1	722.5 7/91	731.6	740.6	783.7	816.1	834.9
AUST	7,284.1	7,607.2	7,908.9 7/90	7,847.3	7,758.9	7,596.9 2/93	7,657.1	7,596.9	7,815.2	8,158.8	8,336.3

Source: The figures for 1988 to 1995 are from Australian Bureau of Statistics, *Labour Force Australia 1978-95*, Cat. no.6204.0, p.23,24,125,126,134,135,143,144,152,153,161,162,170,171. The figures for February 1996 are from Australian Bureau of Statistics, *Labour Force Australia February 1996*, Cat. no.6203.0, p.12,16-18.

In the following table, each of the cells contains three numbers, which are, from top to bottom, the unemployment rate, the labour force participation rate and the percentage of working age population employed. The table shows that, in each of the 'rust belt' States, the unemployment rate peaked well above the national average, and, at that time, the States had a much smaller percentage of their working age population employed than the national average. From then on, these States have fared moderately or significantly worse than the national average by these measures of labour market performance. Six years after the recession, these States were yet to significantly recover from the employment shock. By contrast, the free trade States fared better by these measures, except for Queensland's unemployment rate in the late 1980s.

Dislocation By State: Unemployment, Labour Force Participation Rate and Percentage of Working Age Population Employed (seasonally adjusted figures)

State	2/88	2/89	U/E trough	2/90	2/91	U/E peak	2/92	2/93	2/94	2/95	2/96
VIC	6.0	5.7	4.5 - 63.2	5.1	8.5	12.8 - 62.6	11.1	11.6	11.8	9.3	9.1
	62.2	63.6	12/89	64.7	64.2	8/93	63.1	61.9	62.6	63.4	63.9
	55.8	57.9	58.7	59.6	55.7	49.8	52.0	50.3	50.8	54.1	54.8
SA	9.0	7.9	6.5 - 62.5	7.5	9.0	12.3 - 61.7	11.6	11.2	10.9	9.7	9.8
	60.7	62.3	9/89	62.5	63.1	5/92	61.6	61.9	61.0	62.1	61.7
	51.7	54.6	56.0	55.0	54.1	49.4	50.0	50.7	50.1	52.4	51.9
TAS	9.5	10.8	8.0 - 62.0	8.3	9.9	13.1 - 60.6	11.0	12.2	11.9	11.5	9.9
	61.1	60.1	10/89	61.9	61.8	8/93	60.3	59.5	61.0	60.0	61.5
	51.6	49.3	54.0	53.6	51.9	47.5	49.3	47.3	49.1	48.5	51.6
NSW	7.2	6.6	5.6 - 62.0	6.5	7.8	11.3 - 61.1	9.8	11.3	10.1	8.7	7.7
	61.4	61.4	11/89	61.8	62.2	2/93	62.1	61.1	61.7	62.4	62.5
	54.2	54.8	56.4	55.3	54.4	49.8	52.3	49.8	51.6	53.7	54.8
QLD	9.1	7.6	6.6 - 63.4	7.2	9.7	11.1 - 63.5	10.3	10.6	9.9	8.8	8.8
	61.5	63.3	6/89	64.2	63.3	8/93	63.9	63.5	63.8	64.9	64.6
	52.4	55.7	56.8	57.0	53.6	52.4	53.6	52.9	53.9	56.1	55.8
WA	7.7	5.8	5.5 - 65.2	7.0	9.8	11.4 - 64.7	11.0	9.8	8.9	8.1	7.9
	64.5	65.6	4/89	65.9	65.4	1/92	64.9	63.9	65.9	66.7	66.7
	56.8	59.8	59.7	58.9	55.6	53.3	53.9	54.1	57.0	58.6	58.8
AUST	7.4	6.7	5.8 - 63.6	6.4	8.6	11.3 - 62.7	10.5	11.0	10.4	8.9	8.4
	62.0	63.0	11/89	63.7	63.5	12/92	63.1	62.3	62.8	63.7	63.8
	54.6	56.3	57.8	57.3	54.9	51.4	52.6	51.3	52.4	54.6	55.4

Source: The figures for 1988 to 1995 are from Australian Bureau of Statistics, *Labour Force Australia 1978-95*, Cat. no.6204.0, p.23,24,125,126,134,135,143,144,152,153,161,162,170,171. The figures for February 1996 are from Australian Bureau of Statistics, *Labour Force Australia February 1996*, Cat. no.6203.0, p.12,16-18. Notes: 'Percentage of Working Age Population Employed' is determined by subtracting the unemployment rate from the labour force participation rate. Western Australia's unemployment rate also troughed at 5.5 per cent in May 1989 and November 1989 but with lower labour force participation rates than in April 1989. Australia's unemployment rate also troughed at December 1989 but with a lower labour force participation rate.

In summary, the figures show that, primarily due to manufacturing dislocation suffered in the early 1990s, the 'rust belt' States suffered significant short-term dislocation. These States had not significantly recovered when the Keating Government was defeated in 1996. While numerous factors contributed to the labour market performance of these States in the period, a range of facts suggest that tariff cuts made a solid contribution to the displacement they experienced. This evidence includes that: tariff dependent sectors experienced the greatest dislocation; manufacturing dislocation was prominent in the 'rust-belt' States; and the labour market performances of all the 'rust-belt' States was significantly inferior to that achieved by the 'free trade' States.

Numerous tariff dependent regions also suffered very large increases in unemployment and had recovered little by 1996. Following are a few examples of tariff related dislocation in a few regional areas in Victoria and New South Wales.

Unemployment Trends in Regional Cities with a High Proportion of Tariff Dependent Production

Region	June Quarter									
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
NSW										
Newcastle - Inner	n/a	n/a	n/a	12.5	14.3	15.3	17.4	21.3	12.6	15.0
Newcastle - Remainder	n/a	n/a	n/a	9.8	11.8	13.5	15.0	16.4	10.7	12.8
Wollongong	12.0	7.9	10.5	10.4	8.9	14.5	14.7	15.0	9.5	8.9
Victoria										
Geelong	7.2	11.4	7.7	6.0	10.4	12.8	14.1	13.5	12.6	12.2
Geelong West	7.7	12.4	8.5	7.3	10.8	14.4	16.5	14.8	13.7	12.8
Ararat	4.6	7.1	5.3	4.1	8.3	8.5	12.7	10.0	6.8	9.6
Stawell	5.6	2.3	2.2	6.7	11.8	12.7	19.6	17.8	10.0	6.8
Shepparton	14.2	13.6	12.0	9.2	17.7	22.2	11.9	13.2	10.5	10.4
Moe	7.0	10.2	10.8	8.1	16.1	12.7	19.3	20.2	12.4	13.9
Morwell - Pt A	n/a	n/a	n/a	8.1	15.0	11.6	17.9	19.1	11.6	12.6
Wangaratta	7.5	8.0	5.9	5.5	12.0	15.9	8.3	8.9	7.0	7.9
Benalla	6.6	7.2	5.1	7.2	14.2	20.9	11.1	11.4	9.7	9.0
Maryborough	16.9	16.4	14.8	9.4	17.5	21.2	22.2	17.8	13.8	14.0
Ballarat	10.8	9.8	9.6	8.1	12.9	13.7	19.5	19.1	12.2	11.4
Warrnambool	6.9	10.0	8.5	6.4	8.3	9.9	11.7	11.6	11.6	10.3
Bendigo	7.6	8.8	7.9	5.9	11.4	14.5	16.0	14.6	13.0	12.9

Source: The figures for the June quarter 1987 to the June quarter 1989 are from Department of Employment, Education, Training and Youth Affairs, *Small Area Labour Markets March Quarter 1993*, Australian Government Publishing Service, Canberra, 1993, p.55,58,62-64,66. The figures for the June quarter 1990 to the June quarter 1995 are from Department of Employment, Education, Training and Youth Affairs, *Small Area Labour Markets December Quarter 1995*, Australian Government Publishing Service, Canberra, 1995, p.21,25,30,36-39. The figures for the June quarter 1996 are from Department of Employment, Education and Training, *Small Area Labour Markets September and December Quarters 1996*, Australian Government Publishing Service, Canberra, 1996, p.17,19,25-28.

It is difficult to obtain reliable data on employment in regional areas.¹³² However, there is anecdotal evidence that the unemployment figures noted above were caused in part by dislocation in tariff dependent sectors.¹³³

¹³² Much of the ABS data provides figures for large aggregated regions such as 'north-eastern region', without providing detail for smaller towns. The Department of Employment, Education and Training and its successors provide *Small Area Labour Markets*. Figures provided refer to the city, such as the city of Newcastle, rather than the city and its surrounds. The figures for the broader area are not consistent over time because DEET regularly change the make up of the towns under each major area. In DEET terminology, the figures are for the Statistical Local Area, rather than for the Local Labour Market.

¹³³ Evidence of tariff dependence in these regions and/or evidence of dislocation in tariff dependent sectors within these regions can be found as follows: For Newcastle, see: Taskforce on Regional Development, *Developing Australia: A Regional Perspective: A Report to the Federal Government by the Taskforce on Regional Development*, The Taskforce on Regional Development, Canberra, 1993, p.23. For Wollongong, see: Michael Taylor, op. cit., p.21. For Geelong, see Michael Taylor, op. cit., p.21; Office of Employment, Department of Employment and Training Victoria, *Restructuring of the Passenger Motor Vehicle and Textiles Clothing and Footwear Industries in Victoria: An Overview of the Impact on Employees*, Department of Employment and Training, Melbourne, 1991, p.23,31,32,35,60; Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 2: Appendices*, Industry Commission, Canberra, 1993, p.C27; Brotherhood of St. Laurence *Submission to the Industry Commission Inquiry Into Tariffs and Industry Development*, Unpublished, 1992, p.2. For Ararat, see: Office of Employment, Department of Employment and Training Victoria, op. cit., p.24; City of Ararat, [Their notes for] *Meeting between City of Ararat, Ararat Regional Development Board, Packard CTA Pty Ltd and Senator the Hon. John Button, Minister for Industry, Technology and Commerce, 10 June 1992*,

Similar localised dislocation can be found in the other two 'rust-belt' States. For example, South Australia's industrial 'iron triangle' has suffered tariff related displacement.¹³⁴ Between the June quarter 1990 and the June quarter 1994, unemployment in the city of Port Pirie rose from 8.3 per cent to 16.8 per cent, unemployment in the city of Port Augusta rose from 7.0 to 13.7 per cent, and unemployment in the city of Whyalla rose from 7.8 per cent to 13.8 per cent.¹³⁵ In Tasmania's most tariff dependant region, Mersey-Lyell, which had 16.4 per cent of its 1991 employment in manufactures,¹³⁶ unemployment rose from 9.1 per cent in April 1992¹³⁷ to 16.1 per cent in October 1993.¹³⁸

A number of regional cities and towns also suffered displacement due to reductions in protection for agricultural products. For example, Queensland towns such as MacKay, Innisfail, and Bundaberg suffered dislocation as sugar protection was reduced and all experienced very high unemployment in the period.¹³⁹ In Mildura, Victoria, reduced protection and dumping of Brazilian orange juice concentrate led to significant dislocation¹⁴⁰ and helped increase the unemployment rate from 8.3 per cent in the June quarter 1990 to 18.5 per cent in the June quarter 1993.¹⁴¹ In Renmark, South Australia, where horticulture and its processing dominates production,

Unpublished, 1992; and Ararat Regional Development Board, *Submission to the Parliamentary Inquiry Into Tariffs and Industry Development*, Unpublished, 1993, p.1-3. For Shepparton, see: Michael Taylor, op. cit., p.20; and *Parliamentary Inquiry Into Tariffs and Industry Development: Fifth Interim Report*, Unpublished, 1993, p.10,11. For Moe and Morwell, see: Michael Taylor, op. cit., p.21. For Stawell, see: Office of Employment, Department of Employment and Training Victoria, op. cit., p.179; and *Parliamentary Inquiry Into Tariffs and Industry Development: Fifth Interim Report*, op. cit., p.5,6. For Maryborough, see: Office of Employment, Department of Employment and Training Victoria, op. cit., p.35,60,174,179; Letter by Robert G Orr, Economic Development Officer, City of Maryborough, 3 November 1992 to Peter Marshall, City Manager, outlining his oral submission to the Parliamentary Inquiry Into Tariffs and Industry Development at Ararat on 29 October 1992; City of Maryborough per Peter R Marshall, *Submission to the Parliamentary Inquiry Into Tariffs and Industry Development*, Unpublished, 1992, p.1,2; Maryborough & District Development Committee, *Submission of Maryborough & District Development Committee to Industry Commission Inquiry: Impediments to Regional Industry Adjustment*, Unpublished, 1993, p.1,3-5; and *Parliamentary Inquiry Into Tariffs and Industry Development: Fifth Interim Report*, op. cit., p.6. For Ballarat, see: Michael Taylor, op. cit., p.20; and Office of Employment, Department of Employment and Training Victoria, op. cit., p.35,60,174,177. For Warrnambool, see: Michael Taylor, op. cit., p.20; Office of Employment, Department of Employment and Training Victoria, op. cit., p.35,60,174,180; City of Warrnambool, *Submission to the Industry Commission Inquiry Into Tariffs and Industry Development*, Unpublished, 1993, p.11; and *Parliamentary Inquiry Into Tariffs and Industry Development: Fifth Interim Report*, op. cit., p.2. For Bendigo, see: Michael Taylor, op. cit., p.20; and Office of Employment, Department of Employment and Training Victoria, op. cit., p.60,174,178.

¹³⁴ Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 2: Appendices*, op. cit., p.B6.

¹³⁵ Department of Employment, Education, Training and Youth Affairs, *Small Area Labour Markets Australia December Quarter 1995*, op. cit., p.45.

¹³⁶ Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 2: Appendices*, op. cit., p.B7.

¹³⁷ Australian Bureau of Statistics, *Tasmanian Statistical Indicators June 1993*, Cat. no.1303.6, p.5.

¹³⁸ Australian Bureau of Statistics, *Tasmanian Statistical Indicators January 1994*, Cat. no.1303.6, p.5.

¹³⁹ Department of Employment, Education, Training and Youth Affairs, *Small Area Labour Markets Australia December Quarter 1995*, op. cit., p.10-12.

¹⁴⁰ *Parliamentary Inquiry Into Tariffs and Industry Development: Fifth Interim Report*, op. cit., p.7; *Independent Parliamentary Inquiry Into Tariffs and Industry Development*, op. cit., p.15,46; and John Carroll, 'Economic rationalism and its consequences' in John Carroll and Robert Manne (eds), op. cit., pp.7-26 at p.17.

¹⁴¹ Department of Employment, Education and Training, *Small Area Labour Markets Australia December Quarter 1995*, op. cit., p.39.

significant tariff related displacement has transpired,¹⁴² helping to increase the Renmark municipality's unemployment rate from 13.3 per cent in the June quarter 1990 to 19.7 per cent in the June quarter 1992.¹⁴³

Thus, in those regions in which one or more tariff dependant sectors is significant in production, the 1988 to 2000 tariff program may be causing tariff related displacement. Many of the towns noted above still had very high unemployment rates when the Labor Government left power, suggesting a significant structural component in the unemployment. Structural dislocation can be proportionately more disruptive in regional centres and country towns. Their often narrow industry bases mean that there are often few alternative opportunities for those displaced, and negative multipliers are substantial where a destroyed sector had taken up a large proportion of the region's output.¹⁴⁴ Nation-wide, the result appears to be many pockets of very long-term, structural unemployment, in situations of low labour mobility and few alternative employment opportunities.

This dislocation has some negative effects on restructuring and employment growth. People who lose their jobs may not be able to employ their skills in other similar firms, as their sector may be in structural decline. Unless they re-train for other sectors, such people may experience long-term unemployment. Where people face long periods in poverty and unemployment, the individual, social and economic costs can be large. There is a significant link between long-term unemployment and physical and psychological decline, family breakdown, crime and suicide. People faced with harsh economic and social conditions can not easily become the 'proactive facilitators' of a restructured Australian economy, at least in the short to medium-term. This dislocation exacerbates the hysteresis in Australia's unemployment by adding to the pool of structural unemployment that remains largely untouched during cyclical upturn. The social reality of structural unemployment shows that the rationalist assumption that 'resources released from inefficient sectors will be redeployed into efficient sectors, leading to increases in economic and employment growth' is problematic. It appears that tariff cuts are more effective in destroying inefficient industries, than helping to build new industries.

Further - while some of the dislocation in manufacturing, where it involves the inevitable decline of firms, may constitute necessary restructuring - some may also impede restructuring. Australia's manufacturing industry is already small by international standards and is deficient in the capital goods sectors. Tariff cuts, by eliminating firms and, with them, their technology, equipment, markets, skills, technical know-how and established links within the global division of labour, may be decimating some of the firms upon which restructuring to higher value-added

¹⁴² Riverland Development Corporation, [Submission to the Industry Commission Inquiry Into] *Impediments to Regional Industry Adjustment: Riverland of South Australia*, Unpublished, 1993, p.1,2,4-6.

¹⁴³ Department of Employment, Education, Training and Youth Affairs, *Small Area Labour Markets Australia: December Quarter 1995*, op. cit., p.43.

¹⁴⁴ Australian Chamber of Manufactures, Bendigo, 'Policy for Balanced Manufacturing Development' in Australian Chamber of Manufactures, Bendigo, *Submission to the Independent Inquiry Into Tariffs and Industry Development*, Unpublished, 1992, p.1. [The second page 1]

production depends.¹⁴⁵ Further, the closure of major manufacturing firms can decimate highly competitive small and medium-sized enterprises (SMEs), upon which restructuring is also crucially dependant.

These economic costs are compounded by the loss of tax revenue where people become unemployed, and by the need to increase outlays on unemployment benefits, labour market programs and a range of community services needed by displaced workers.

Rationalist models may produce an emphasis on dislocation because they assume that resources are fully employed. In this situation, the movement of resources requires that they be released from inefficient firms.¹⁴⁶ This focus on dislocation is misplaced because Australia has experienced mass unemployment for decades. This means there are already numerous 'resources' available to be deployed in growth sectors, without any immediate need for resources to be released from declining sectors. In this situation, the key to restructuring is the positive redeployment of resources in sectors that can bring fast growth, not further dislocation. Of course, over decades, our least viable firms, such as some in low value-added manufactures, will need to be left to decline and be replaced by high value-added manufactures and services. However, there appears little case for rapid, immediate destruction.

Perhaps not surprisingly, rationalists tend to advocate excessively rapid elimination of tariffs. The structural displacement suffered in the period could have been far worse had the Liberal Party, the IC,¹⁴⁷ Ross Garnaut¹⁴⁸ or the Paul Keating of November 1989¹⁴⁹ decided the matter, as they all supported completely free trade by 2000. Worse still, imagine the displacement had Treasury had their way in the 1988 Statement, and had tariffs completely abolished within five years.¹⁵⁰

Rapid tariff cutting can lead to the destruction of competitive firms and reduced economic and employment growth. The Treasury prescription, or free trade by 2000, in conjunction with no active industry policy, could have resulted in the obliteration of the PMV and TCF industries and a major decline in economic and employment growth. This view is expressed in the IMP model of the National Institute for Economic and Industry Research (NIEIR), which estimated that Garnaut's recommendation for free trade by 2000 would reduce manufacturing output by 4.75 per cent, GDP by 1.6 per cent and employment by one per cent.¹⁵¹

Most particularly, long run employment and growth may be higher where tariff cuts are delayed in recession, in which structural displacement already increases

¹⁴⁵ Margaret Beardow, 'Why we can't run on raw materials', *Australian Business*, vol.11, no.19, 6 March 1991, pp.44-45 at p.45.

¹⁴⁶ Greg Crough & Ted Wheelwright, *op. cit.*, p.89.

¹⁴⁷ Ross Garnaut, ch.2 'Trade and industry policy after the Uruguay Round', *op. cit.*, p.63.

¹⁴⁸ Ross Garnaut, *Australia and the Northeast Asian Ascendancy*, *op. cit.*, p.222.

¹⁴⁹ Glenn Milne, 'Tariff about-face no protection for Paul', *The Australian*, 27 March 1992, p.11 reported that in November 1989, in response to the release of the Garnaut report, Keating endorsed the recommendation that all protection be removed by 2000.

¹⁵⁰ Randall G. Stewart, *op. cit.*, p.113.

¹⁵¹ *Independent Parliamentary Inquiry Into Tariffs and Industry Development*, *op. cit.*, p.55.

dramatically,¹⁵² then continued when the economy is recovering. Manufacturers can generally control only around 30 to 40 per cent of their costs.¹⁵³ They therefore have little capacity to deal with sharp declines in demand combined with rapidly rising exposure to international competition.¹⁵⁴ Excessively speedy exposure to international competition would simply result in dislocation, while the recessed climate means minimal medium-term job growth in other sectors. The result is a negative effect on growth and employment, at in the short and medium-term.¹⁵⁵

Pausing tariff reductions in recessions may assist more firms to survive and save jobs numbering in the tens of thousands. Such firms can continue to contribute to production, employment and restructuring. Some of the economic and social costs associated with structural dislocation can also be avoided. The benefits of tariff reforms can be achieved by progressing to a low protection economy in the years when the economy is growing modestly or strongly. Using this approach, significant extra displacement can be avoided, while the benefits of moving to lower tariffs can still be achieved, if a year or two later.

This was the reason government reports recommended tariffs not be cut during periods of low or negative growth in the years after the Whitlam 25 per cent across-the-board tariff cut in 1973.¹⁵⁶ Tariff cutting in the 1990 to 1992 period seemed ill-advised given that firms already had to cope with the recession, not to mention very high interest rates, high inflation and an inefficient microeconomy. In these circumstances, many efficient firms, including some exporters, were already being destroyed. Imposing tariff cuts on firms during recession simply worsens the structural dislocation.¹⁵⁷ This was why, during the recession, the Australian Council of Trade Unions (ACTU), the majority of the Federal Cabinet, including John Button, and the South Australian and Victorian Governments all called for a tariff pause.¹⁵⁸

¹⁵² Industry Commission, *Annual Report 1991-92*, op. cit., p.49,83 shows that their index of structural change rose substantially in the recessions of 1974-75 and 1982-83.

¹⁵³ Chamber of Commerce and Industry South Australia Inc., [*Submission to the*] *Independent Parliamentary Inquiry Into Tariffs and Industry Development*, Unpublished, 1992, p.2 notes that some manufacturing firms in the tradeable sector control only around 30 per cent of their costs. Anand Kulkarni, ch.19 'Networking and industry development' in Michael Costa & Michael Easson (eds), op. cit., pp.357-372 at p.359-360 note that manufacturers directly account for less than 40 per cent of their costs, less than any other industry.

¹⁵⁴ Michael Deeley, 'Government must do its bit', *Australian Business*, vol.11, no.19, 6 March 1991, pp.46-47 at p.46.

¹⁵⁵ John Carroll, op. cit., pp.7-26, at p.15.; and Bill Weekes, op. cit., p.183.

¹⁵⁶ Committee to Advise on Policies for Manufacturing Industry, *Policies for Development of Manufacturing Industry: A Green Paper: Volume 1: Report to the Prime Minister by the Committee to Advise on Policies for Manufacturing Industry*, Australian Government Publishing Service, Canberra, 1975, p.177,178; *White Paper on Manufacturing Industry*, op. cit., p.22,36; and John Crawford, Brian Inglis, R.J.L. Hawke & N.S. Currie, op. cit., p.10.5, 10.13, 10.14.

¹⁵⁷ South Australian Manufacturing Advisory Council, *South Australian Industry in the 1990s: A Proposal for Action: Submission to the Commonwealth Government*, Unpublished, 1992, p.20.

¹⁵⁸ Laura Tingle, 'PM, Ministers considered stopping tariff cuts', *The Australian*, 20 October 1992, p.1,2 shows that Button and most of the Cabinet wanted a tariff pause or slowdown, but Keating refused; 'ACTU backs tough company tax rules in \$1bn. jobs plan', *The Australian*, 16 July 1992, p.1,2 shows the ACTU were lobbying the Federal Government for a tariff pause; Laura Tingle, 'Labor divided on tariffs', *The Australian*, 17 July 1992, p.1 shows that the Victorian and SA Labor Governments and the Federal Parliamentary Left sought a tariff pause during the recession; and Glenn Milne, 'Protection rackets', *The Weekend Australian*, 19-20 September 1992, p.21 shows that key parts of the Labor Unity faction at Federal level also sought a tariff

It is also important to be measured about what tariff pauses can achieve. Senator Spindler concluded from his tariff inquiry that 200,000 people would have retained their jobs if a 12 month pause and active industry policies had been adopted during the recession,¹⁵⁹ and that a further 250,000 jobs were likely to be lost in the 1992 to 1996 period.¹⁶⁰ This would appear to be a significant overestimate of the capacity of tariff pauses to save jobs and an underestimate of the capacity of tariff cuts to create jobs. The dislocation suffered in the period had several more significant causes than tariff cuts. However, pausing tariff cuts in recessions may save jobs numbering in the tens of thousands.

Finally, as Labor arguably demonstrated, economic welfare can be improved by combining tariff reductions with sectoral plans in the most affected sectors, to enable such sectors to restructure, rather than simply be obliterated. For example, the Car Plan successfully restructured the car industry. When Labor came to power, the industry had too many producers making too many, high cost, uncompetitive models, on a scale too small to be competitive.¹⁶¹ The industry had poor productivity and quality, an inward focus, and was heavily reliant on high tariffs.¹⁶² The 1985 Button Plan sought to restructure the industry to a maximum of three producers and six models by 1992. Tariff cuts and penalties for low volume production provided the 'stick', while export facilitation and other assistance provided the 'carrot'.¹⁶³

The Car Plan worked. It forced companies to focus on high value-added production and their competitive strengths.¹⁶⁴ There are now three producers, namely Ford, Mitsubishi and the GMH/Toyota joint venture, and all are concentrating primarily on high volumes of one model, with exports a key focus. Productivity, cost, quality, competitiveness and efficiency have improved markedly. The companies are becoming strongly integrated in their global parents' international division of labour. Transport equipment exports increased from \$474 million in 1985-86¹⁶⁵ to \$2,490 million in 1995-96.¹⁶⁶ These exports were propelled by the export facilitation scheme, as Mitsubishi,¹⁶⁷ Toyota, Ford, Nissan and even the IC have argued.¹⁶⁸ In turn, such

pause, but Keating and his advisors refused. 'The sweetest victory of all' - The final episode of *Labor in Power* - Aired on ABC-TV 9.30-10.30, 5 July 1993 included John Button saying he was against the March 1991 Statement because he thought it moved too fast and included Bill Kelty saying he regretted not '...going in harder...' against the 1991 Statement because of the negative effects of tariff reductions in the context of economic recession.

¹⁵⁹ Sid Spindler, 'Tariff report released in Parliament' - *Media Release 93/241*, 26 May 1993.

¹⁶⁰ John Kerin, 'Cash bid to ease tariff pain', *The Advertiser*, 20 October 1992, p.10.

¹⁶¹ Bob Manning, ch.7 'A manufacturing view' in Roy Green & Rodin Genoff (eds), *Making the Future Work: Crisis and Change in the South Australian Economy*, Allen and Unwin, St Leonards, New South Wales, 1993, p.113-134 at p.121,122.

¹⁶² Office of Employment, Department of Employment and Training Victoria, *op. cit.*, p.4.

¹⁶³ Industry Commission, *The Automotive Industry*, *op. cit.*, p.12.

¹⁶⁴ Michael Lynch, 'How the car plan took the right road', *The Australian Financial Review*, 10 February 1994, p.14.

¹⁶⁵ Australian Bureau of Statistics, *Balance of Payments Australia 1988-89*, Cat. no.5303.0, p.17.

¹⁶⁶ Australian Bureau of Statistics, *Balance of Payments Australia: September Quarter 1996*, Cat. no.5203.0, p.17.

¹⁶⁷ Mitsubishi Motors Australia Ltd., *Submission to the Parliamentary Inquiry Into Tariffs and Industry Development*, Unpublished, 1992, p.2.

¹⁶⁸ Ron Hammerton, 'Hands off car plan, says Nissan', *The Australian*, 10 September 1992, p.13; Industry Commission, *The Automotive Industry*, *op. cit.*, p.30-32,66,67.

exporting provides the necessary economies of scale for firms to achieve cost competitiveness.¹⁶⁹

A rationalist approach, by contrast, may have decimated the industry. The IC 1990 report argued for rapid removal of all assistance for the car sector,¹⁷⁰ stated that export facilitation was harming efficiency in resource allocation, and rejected any constructive industry strategy for the car sector, without any detailed consideration of whether it could foster growth.¹⁷¹ Similarly, the Hewson Liberal Opposition proposed zero tariffs by 2000. Ford,¹⁷² Holden,¹⁷³ Toyota¹⁷⁴ and even IC Chairman Scales¹⁷⁵ and Nissan (despite having switched to imports!)¹⁷⁶ claimed that the Liberal program would lead to the complete shutdown of the entire motor vehicle industry. Without a car industry, Australia would lose the remaining 90,000 jobs in the transport equipment industry¹⁷⁷ and well over 200,000 more in industries reliant on the car sector.¹⁷⁸ The trade balance would also deteriorate by more than \$5 billion.¹⁷⁹ Such a scenario would have been all the more likely had the Liberal Party been able to implement their policy to remove the \$12,000 tariff on Japanese second hand cars.¹⁸⁰ Such cars were allowed freely into New Zealand and, between 1986 and 1991, cut the new car share of the market from 94 to 49 per cent.¹⁸¹

¹⁶⁹ Angus MacKenzie, 'Export or die - that's the car plan', *Australian Business*, vol.11, no.21, 20 March 1991, p.24; N. B. Iddles, *Automotive Manufacturing Industry Post-1992: Gearing Up for Change: Speech to The Society of Automotive Engineers (Australasia), Wednesday May 1st, 1991*, Unpublished, 1991, p.20; and Industry Commission, *The Automotive Industry*, op. cit., p.105.

¹⁷⁰ Toyota Motor Corporation, op. cit., p.4. Industry Commission, *The Automotive Industry*, op. cit., p.136 notes that this was the minority position in the final report.

¹⁷¹ Industry Commission, *The Automotive Industry*, op. cit., p.44,69.

¹⁷² Laura Tingle, '60,000 jobs could go under Libs: Ford', *The Weekend Australian*, 19-20 September 1992, p.1,6 notes that Ford sent their employees a memo entitled 'Employee information: Car industry policies' stating that under zero tariffs they believed the whole car industry would shutdown.

¹⁷³ Glenn Milne, Laura Tingle and Tim Duncan, 'Toyota boss backs PM', *The Australian*, 24 September 1992, p.1,2 at p.1 note that Holden strongly criticised Dr Hewson's policies.

¹⁷⁴ *ibid.*, p.1 notes that Toyota Japan's President, Dr. Shoichiro Toyoda, stated that Toyota's \$730m. investment to establish a new plant at Altona was predicated on the Governments policies persisting into the 21st century and, 'Zero 2000' - *Lateline*, ABC TV - Aired 10.30 to 11.05pm, 5 May 1992 has Toyota Australia head Bob Johnson stating that there would be no car industry under zero tariffs.

¹⁷⁵ 'Zero 2000', op. cit., included Bill Scales stating that at zero tariffs, the industry would completely shutdown.

¹⁷⁶ Ron Hammerton, 'Hands off car plan, says Nissan', *The Australian*, 10 September 1992, p.13 notes that Nissan supported the Government's car plan over that of the Coalition, despite having switched to imports because they believed that stability was vital to the industry.

¹⁷⁷ Australian Bureau of Statistics, *Labour Force Australia November 1993*, op. cit., p.39.

¹⁷⁸ This estimate is based on the view of Tony Bushell, Director of Supply, Mitsubishi Australia, that '...for every job created in vehicle assembly or [the] component manufacturing sector, 2.7 jobs will be added elsewhere.' as reported by Bob Jennings, 'Car companies set to accelerate SA economy', *The Advertiser*, 10 February 1994, p.13 and ignores the view of GMH that 6 jobs were created in SA for every job in its SA operation as reported by Lindsay Olney, 'Labor revs up its push on car tariffs', *The Advertiser*, 3 September 1992, p.19.

¹⁷⁹ Rodin Genoff, *Industry Policy and Sectoral Plans Under Labor - A University of Adelaide Research Seminar Paper*, 3 August 1992, Unpublished, 1992, p.20.

¹⁸⁰ Lenore Taylor & Tim Duncan, 'Hewson gives way on used cars', *The Australian*, 25 September 1992, p.1,2 at p.1.

¹⁸¹ James E. Buck, *Submission to the Parliamentary Enquiry into Tariffs and Industry Development, Vehicle Builders Employeess' Federation of Australia*, Unpublished, 1992, p.5.

Other manufacturing sectors would have also faced significant dislocation because: firstly, the car sector produces capability in processes crucial to the development of the manufacturing industry, such as design, engineering, electrical and electronics expertise, R&D, skill development and best practice work organisation;¹⁸² and secondly, car making takes major parts of the output of a range of vital sectors including machine tools.¹⁸³ GMH claim that for every job created in its South Australian operation, 6 others are created in the broader economy.¹⁸⁴ Every job in car producing firms creates 3 more in the component sector.¹⁸⁵ Thus, the loss of the car sector, which had 70,000 employees, may have led to the loss of several hundred thousand jobs in the Australian economy. Finally, the loss of the car sector would have produced significant regional dislocation in cities such as Geelong and Adelaide.

Thus, the combination of sensibly phased tariff cuts and sectoral policy preserved the significant benefits of the car industry and appeared to produce higher economy-wide growth, employment and restructuring than would have been achieved by a hardline rationalist approach. A more phased tariff cutting approach, in conjunction with industry policies such as export facilitation, has also been, to varying degrees, successful in restructuring a range of industries such as steel, heavy engineering and TCF.

Conclusion

A key benefit of tariff reform has been to end Australia's unfathomable fixation with the tariff as the key instrument for industry development. Australia's high tariff policies failed. By 'propping up' inefficient industries whenever their employment was threatened, tariffs impeded structural change, growth and exports. In particular, protection may have contributed to Australia's failure to restructure its manufacturing sector from low value-added production to ETMs in the decades after 1960 and to capitalise on the significant growth in world exports during the period. Tariffs also increased input costs for producers throughout the economy and allowed producers to become complacent and inefficient.

In the past, tariffs may have been useful in assisting a developing nation to industrialise, but the strategy needed to be targeted on particular sectors, and tariffs must be phased down once an industrial base has formed. However, with modern transport and communications, even this limited use of the tariff is becoming less

¹⁸² Federal Chamber of Automotive Industries, *Submission to the Industry Commission Draft Report on the Automotive Industry*, Unpublished, 1990, p.21,22.

¹⁸³ Pappas, Carter, Evans & Koop/Telesis, op. cit., p.179 notes that the car industry takes major parts of the output non-ferrous die castings (40 per cent), ferrous foundries (12 per cent), fasteners (23 per cent), plastic mouldings (10 per cent), tool and die (67 per cent), machine tools (60 per cent), glass (6 per cent), industrial paint (10 per cent) and steel (8 per cent). Engineering Employers Association South Australia, *Submission to the Independent Parliamentary Enquiry into Tariffs and Industry Development*, Unpublished, 1992, p.14 noted that there are 42 manufacturing codes required to make a vehicle.

¹⁸⁴ Lindsay Olney, op. cit., p.19.

¹⁸⁵ This was the finding of Manufacturing Advisory Council, *Post 1992 - Assistance for the Automotive Industry* as noted in Paul Noack, Vehicle Builders Employees Federation (SA Branch), *Submission to the Parliamentary Enquiry Into Tariffs and Industry Development*, Unpublished, 1992, p.16.

effective. Tariff protection does little to address the causes of competitive advantage and indeed, can often delay much needed adjustment. More than ever, tariffs are irrelevant to achieving competitiveness, restructuring and employment growth, and the end of the widespread use and abuse of tariffs should be celebrated.

Tariff reductions have produced economic benefits. Exposure to international competition forced firms to increase competitiveness in order to survive. Tariff cuts also appear to have contributed to restructuring by: reducing input costs; removing most of the assistance bias against exports; and stopping the practice of 'propping up' declining sectors, thereby encouraging those sectors to become productive and survive, or decline and give up their resources for use in more efficient sectors. This process would seem likely to allow structural change in Australia to more effectively follow world trade growth trends.

However, tariff cutting appears to produce only modest economic benefits. Perhaps most crucially, tariff cuts do little to create competence in those capabilities - such as R&D and skills formation - that are the keys creating an innovation-driven economy. In a world where competitive advantage and restructuring is dependent on the capacity to produce innovative, high quality, high value-added products and services, tariff reform is of only marginal utility.

It is also widely admitted that tariff reductions have little net impact on employment creation, a disappointing result given the structural dislocation they cause. Further, while tariff cuts may have fostered exports, they have not helped to create large strategic exporters. Finally, tariff cuts appear to have, at best, no net effect on the trade balance, and at worst, a moderate negative effect.

The limited benefits produced by tariff cuts do not show that tariff cutting should not occur. They do however indicate that they should only form one small component of a much broader industry policy agenda. Unfortunately, it appears that the whole rationalist agenda does little to foster restructuring, competitiveness and employment growth.

The benefits of tariff cutting may have also been overstated. Input cost reductions promised appear likely to be smaller than predicted, and are less important in achieving restructuring now that competitive success increasingly relies on innovation, quality and value adding, rather than price. Tariff cuts, combined with minimal active industry policy, may also fail to encourage Australia's most competitive sectors to expand, as Australian and foreign companies may be encouraged to invest offshore by more attractive government assistance regimes.

Finally, the rationalist approach to tariff reform appears to be flawed. It may have been a mistake to cut tariffs in the middle of the worst recession in 60 years, amidst a high interest rate, high inflation environment. Rationalist prescriptions for even more rapid tariff cuts, with no restructuring assistance for affected sectors, may have produced very significant dislocation. Some of this dislocation would have harmed restructuring, by creating huge pools of long-term structurally unemployed people, unable to quickly be redeployed in efficient industries, and by destroying parts of the manufacturing base necessary for restructuring to ETMs. Creating significant dislocation in order to achieve a low tariff regime quickly would appear likely to

produce worse outcomes for restructuring than a more phased approach, combined with restructuring assistance for the most affected sectors. This approach can still bring all the benefits of a low tariff environment, just a few years later.

On balance, sensibly phased tariff reductions during periods of economic growth appear to be economically beneficial, particularly where they are accompanied by effective, temporary sectoral plans to assist affected sectors to adjust. This approach appears to produce moderate net beneficial effects for restructuring, employment growth and national competitiveness, although these benefits come at a cost of significant structural dislocation.

Chapter Two: Free Market Infrastructure Reform

Introduction

This chapter assesses the impact of rationalist free market reform of Australia's infrastructure sectors on employment growth, restructuring and national competitiveness. The five key tenets of free market infrastructure reform are pricing reform, corporatisation, increased competition, privatisation and deregulation. All five were strongly advocated by rationalist academics, the IC and the Labor Government in the period.¹⁸⁶

All five tenets are means to achieving a market allocation of resources.¹⁸⁷

Rationalists recommend pricing policies that remove any assistance given to the provision of infrastructure services.¹⁸⁸ For example, the IC recommend that all government business enterprises (GBEs) '...earn at least a 'hurdle rate' of return on new investment comparable to that in the private sector.'¹⁸⁹ Consistent with free market views, the IC claim that any return below market rates would mean '...resources would be inappropriately directed to public utilities'.¹⁹⁰ Such policies had substantial effects in enforcing free market resource allocation because significant assistance had been provided to industry through subsidised infrastructure provision.¹⁹¹

Rationalists also endorse corporatisation,¹⁹² which involves removing any infrastructure assistance through policies to: vest management in commercial boards; establish objectives that relate to commercial performance only; remove all community service obligation (CSO) provision; leave social provision solely to direct budgetary allocations; apply rigorous performance monitoring; make all GBEs liable for all taxes and charges; require rates of return equivalent to what the private sector

¹⁸⁶ The Industry Commission's policy on infrastructure provision is set out in ch.2 'Infrastructure reform: A gateway to a better future' in Industry Commission, *Annual Report 1990-91*, op. cit., p.9-17. Simon Domberger, ch.8 'The role of public enterprises in microeconomic reform' in Peter Forsyth (ed.), *Microeconomic Reform in Australia*, Allen and Unwin, St Leonards, New South Wales, 1992, pp.164-176 at p.164, 168-170 describes the Federal Government's rationalist microeconomic reform agenda as seeking to reduce inefficiency '...by the restoration of market forces where appropriate, the removal of barriers to entry in sectors that would benefit from greater competition...', deregulation, privatisation and corporatisation. *Working Nation: Policies and Programs*, Australian Government Publishing Service, Canberra, 1994, p.22 noted that the Government would seek to increasing the efficiency of infrastructure provision '...through deregulation, corporatisation, privatisation and improved public sector management.'

¹⁸⁷ Alan Wood, 'Less change, more reform', *The Weekend Australian*, 22-23 May 1993, p.18.

¹⁸⁸ For example, Henry Ergas, 'Privatisation and market forces: Their role in infrastructure provision' in Stephen King & Peter Lloyd (eds), op. cit., pp.147-165 at p.148-151,161-162 endorses charging prices that reflect costs to prevent the 'excessive investment' that occurs where infrastructure provision is subsidised, as well as the removal of all cross-subsidies and the closure of infrastructure provision that doesn't make a market return.

¹⁸⁹ Industry Commission, *Annual Report 1990-91*, op. cit., p.14.

¹⁹⁰ *ibid.*, p.14.

¹⁹¹ *ibid.*, p.257.

¹⁹² See Simon Domberger, op. cit., p.169,170; and Frederick G. Hilmer, Mark Rayner & Geoffery Taperell, *National Competition Policy: Report by the Independent Committee of Inquiry*, Australian Government Publishing Service, Canberra, 1993, p.300,301.

would seek to achieve; require dividend payments to government similar to that achieved by the private sector; remove any borrowing advantages received by GBEs; and make all corporatised authorities subject to the Corporations law and the Trade Practices Act.¹⁹³

IC policies also recommend the structural separation of activities performed in markets dominated or monopolised by GBEs and the introduction of competition and privatisation where appropriate.¹⁹⁴ Competition helps to ensure a market allocation of resources because any substantial subsidisation by GBEs in the context of a competitive market would mean bankruptcy.¹⁹⁵ As the IC wrote: 'Competition provides direct incentives for...efficient pricing practices...'¹⁹⁶

Deregulation overlaps with, and reinforces, corporatisation policy, through the removal of CSOs and the establishment of exclusively commercial objectives.¹⁹⁷ Deregulation can also facilitate competition, for example, by removing regulations that restrict market entry.¹⁹⁸

Finally, rationalists are strong advocates of privatisation, again, in order to eliminate any government subsidy and establish a market allocation of resources.¹⁹⁹ The rationalist view that free markets bring efficient resource allocation underpins the IC claim that: '[g]ains to the community from public asset sales come primarily from efficiency improvements, not from maximising...the sale price'²⁰⁰

The IC have recommended implementation of the market reform agenda in numerous infrastructure sectors including rail,²⁰¹ electricity and gas,²⁰² ports,²⁰³ and water²⁰⁴ and Commonwealth and State Governments have implemented, or agreed to implement, much of the agenda.

¹⁹³ Industry Commission, *Energy Generation and Distribution: Volume 1: Summary and Recommendations: Report No.11*, Australian Government Publishing Service, Canberra, 1991, p.3-6 includes all this under the heading 'A corporatisation model for public utilities'. This agenda is also outlined in: Industry Commission, *Annual Report 1991-92*, op. cit., p.110-115; and Industry Commission, *Annual Report 1990-91*, op. cit., p.12.

¹⁹⁴ Industry Commission, *Annual Report 1990-91*, op. cit., p.8; and Industry Commission, *Annual Report 1991-92*, op. cit., p.19,102.

¹⁹⁵ *ibid.*, p.108,109; Industry Commission, *Annual Report 1990-91*, op. cit., p.13 also endorses 'free entry' into infrastructure provision markets.

¹⁹⁶ Industry Commission, *Annual Report 1990-91*, op. cit., p.108.

¹⁹⁷ Such policies are recommended by Industry Commission, *Annual Report 1990-91*, op. cit., p.12.

¹⁹⁸ Simon Domberger, op. cit., p.169.

¹⁹⁹ Industry Commission, *Annual Report 1990-91*, op. cit., p.15-17; and Industry Commission, *Annual Report 1991-92*, op. cit., p.115,116.

²⁰⁰ Industry Commission, *Annual Report 1990-91*, op. cit., p.15.

²⁰¹ Industry Commission, *Rail Transport Volume 1: Report: Report No.13*, Australian Government Publishing Service, Canberra, 1991, p.xvi,,xix,xx,xxi,xxiii.

²⁰² Industry Commission, *Energy Generation and Distribution: Volume 1: Summary and Recommendations*, op. cit., p.1,5,12,15-17,20,23,25-27.

²⁰³ Industry Commission, *Port Authority Services and Activities: Report No.31*, Australian Government Publishing Service, Canberra, 1993, p.xvi,xvii,xx,xxi,xxiii,131-134,145,177,178.

²⁰⁴ Industry Commission, *Water Resources and Water Waste Disposal: Report No.26*, Australian Government Publishing Service, Canberra, 1992, p.2,3,6,10-13,85,86.

The Hilmer Report was commissioned in order to speed the implementation of the market infrastructure reform program.²⁰⁵ The report recommended the 'break up' of public monopolies through the separation of natural monopoly and potentially competitive activities, and the separation of potentially competitive activities into a number of smaller, independent business units, some or all generally to be private. As Hilmer notes, establishing competitive markets will remove the ability to provide subsidised infrastructure services.²⁰⁶

Furthermore, the Hilmer Report recommended that competitive neutrality be established within one year of the introduction of competition.²⁰⁷ To achieve competitive neutrality, the report recommended privatisation as '...the most appropriate response in most circumstances',²⁰⁸ with corporatisation the next option, followed by either removal of the specific advantages of the GBE in question or market pricing.²⁰⁹ As the Hilmer report states, the logic underpinning the introduction of competition in markets involving public monopolies and their subsidised infrastructure provision is to avoid the '...misallocation of resources and inefficiency which adversely affects community welfare (associated with such policies).'²¹⁰ Again we are back to the simple policy prescription: 'Let resources be allocated by the market.'

The Hilmer Report catalysed the implementation of the market infrastructure reform agenda by setting a tight timetable for implementation and establishing the National Competition Council to guide governments seeking to implement the agenda.²¹¹ The Premiers and the Prime Minister agreed in principle to open up GBEs to an environment of open competition within two years at the February 1994 COAG meeting,²¹² as well as agreeing to jointly develop national competition legislation to allow the structural separation of public monopolies including gas, electricity and the railways.²¹³

Rationalist academics such as Ergas,²¹⁴ as well as rationalist government advisory bodies, claimed that the market agenda would produce large growth and employment gains. A market allocation of resources would bring optimal allocative efficiency, while the introduction of competition would create pressure for improved productive efficiency, better quality and price reductions, leading to increases in

²⁰⁵ Frederick G. Hilmer, Mark Rayner & Geoffery Taperell, op. cit., p.xviii,xix outlines the terms of reference.

²⁰⁶ *ibid.*, p.xxix,xxx,xxxi,xxxiii, and ch.10 'Structural Reforms of Public Monopolies and Competition Policy', pp.215-238.

²⁰⁷ *ibid.*, p.308,309.

²⁰⁸ *ibid.*, p.300.

²⁰⁹ *ibid.*, p.300-303.

²¹⁰ *ibid.*, p.86.

²¹¹ *ibid.*, p.xxxviii,xxxix,xxxvi,xxxvii.

²¹² Bruce Montgomery, 'COAG agrees on Hilmer reforms', *The Weekend Australian*, 26-27 February 1994, p.4.

²¹³ Laura Tingle, 'PM, States in deal to carve up monopolies', *The Weekend Australian*, 26-27 February 1994, p.1; and *Working Nation: Policies and Programs*, op. cit., p.38,39.

²¹⁴ Henry Ergas, op. cit., p.156-158.

national output and exports.²¹⁵ The IC, in their 1988-89 Annual Report, used the ORANI model to estimate that implementation of their market microeconomic reform agenda would, in the long run, increase GDP by 6.5 per cent and create 53,000 additional jobs.²¹⁶

Of course, the IC's ORANI results are the simple outcome of the free market assumptions keyed in. Put simply, the process involves programming a model to assume that free market reforms are positive for growth and employment, then running simulations in which ORANI shows that free market reforms are beneficial for growth and employment. For example, Quiggan has noted that privatisation, corporatisation and cuts to public sector employment always are assumed to result in economic gain, regardless of - and in some cases in spite of - the empirical evidence of a particular situation.²¹⁷ The IC themselves admit that their ORANI simulations provide no foundation for market policies and that '...it is not possible to model the effects of many of the recommendations, such as corporatisation and increased competition, in a model such as ORANI.'²¹⁸

ORANI also fails to include many of the costs of market reform in its calculations. For example, the impact of cost pricing in forcing some infrastructure service prices to rise, as would occur in sectors such as rail, electricity, postal services, gas, water and heavy vehicles, was not modelled.²¹⁹ Further, no consideration was given to the situation in which major cost reductions would not be passed on to consumers and producers in full.²²⁰ The lack of credibility of these rationalist econometric studies is also evidenced by the enormous difference in the results they produce. For example, whereas the IC predict a 6.5 per cent GDP increase, an EPAC study predicted a 15 per cent GDP increase from the free market microeconomic reform program.²²¹

Thus, to determine the impact of free market infrastructure reform on employment, restructuring and national competitiveness, analysis needs to take place on the basis of reasoning, combined with evidence drawn from what has actually happened in infrastructure sectors. This approach is attempted below.

²¹⁵ Bureau of Industry Economics, *International Performance Indicators: Overview: Research Report 53*, Australian Government Publishing Service, Canberra, 1994, p.7; and Industry Commission, *Annual Report 1989-90*, op. cit., p.31.

²¹⁶ Industry Commission, *Annual Report 1989-90*, op. cit., p.27,28.

²¹⁷ John Quiggan, 'The Industry Commission approach to public sector reform', *Evatt Papers*, vol.1, no.1, 1993, pp.63-99, p.71,72,84.

²¹⁸ Industry Commission, *Energy Generation and Distribution Volume 2: Report: Report No.11*, Australian Government Publishing Service, Canberra, 1991, p.42.

²¹⁹ *ibid.*, p.42.

²²⁰ Bureau of Industry Economics, *International Performance Indicators*, op. cit., p.78.

²²¹ Richard Filmer & Dan Dao, *Economic Effects of Microeconomic Reform: Economic Planning Advisory Council Background Paper No.38*, Australian Government Publishing Service, Canberra, 1994, p.41.

Strengths of Free Market Infrastructure Reform

Labor Tackle Microeconomic Reform

Since 1950, the Labor Governments of 1983 to 1996 were the first to focus in a detailed, systematic way on the microeconomy. By opening up the Australian economy through tariff cuts and financial deregulation - themselves microeconomic reforms - Labor created pressure for a stronger focus on increasing competitiveness throughout the economy, including in infrastructure provision.²²² While much argument continues about which policies are most appropriate to improving Australia's microeconomy, it is true that a more efficient, competitive microeconomy will improve the supply-side of the economy and thereby bring faster economic and employment growth, with lower inflation. This long overdue focus on the microeconomy must therefore be applauded.

Performance Improvements by Government Trading Enterprises (GTEs)

The rationalist policy framework appears to have substantially improved the performance of infrastructure providers. The figures provided below are from two sources. The first source is *Government Trading Enterprises Performance Indicators 1987-88 to 1992-93*, which covers 56 of the major GTEs in Australia. This study charts the progress of six Commonwealth GTEs involved in energy, transport and communications and the major State authorities involved in electricity, gas, water, urban transport, railway and port industries. Together, they account for around two-thirds of total GTE employment.²²³ The second source is *Government Trading Enterprises Performance Indicators 1990-91 to 1994-95*, which covers 68 GTEs that together account for approximately 75 per cent of total GTE employment. Unfortunately, statisticians have been unable to provide a consistent time series between reports.²²⁴ For this reason, two sets of data will be provided each time that statistics are provided below. While this is not ideal, a broad picture of general magnitude of the success of the reforms can be adequately captured.

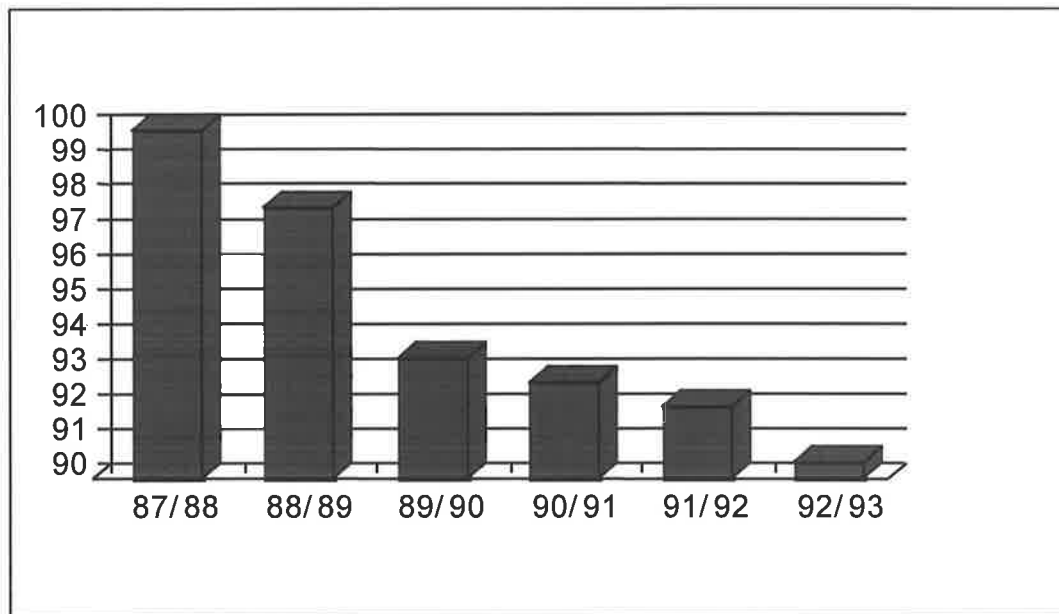
Overall, GTEs achieved an average real price reduction of around 17 per cent between 1987-88 and 1994-95.

²²² This was argued by John Button as quoted in Paul Kelly, *The End of Certainty: The Story of the 1980s*, Allen and Unwin, St Leonards, New South Wales, 1992, p.388.

²²³ Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1987-88 to 1992-93*, Industry Commission, Canberra, 1994, p.1.

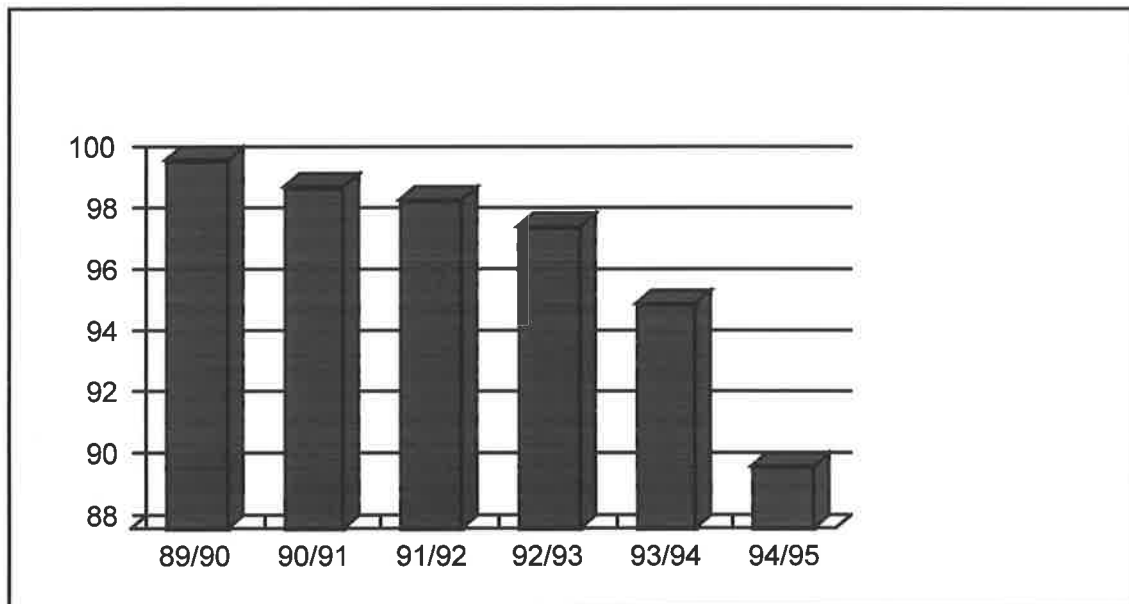
²²⁴ Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1990-91 to 1994-95*, Industry Commission, Canberra, 1996, p.iii,iv.

GTE Real Prices 1987-88 to 1992-93 (Index Points)



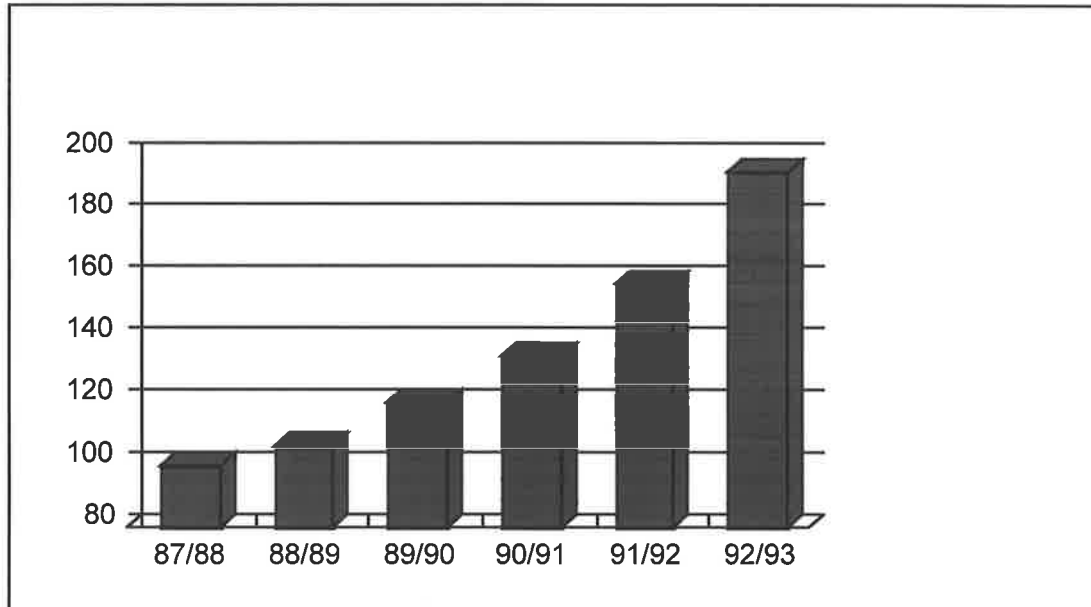
Source: Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1987-88 to 1992-93*, Industry Commission, Canberra, 1994, p.4.

GTE Real Prices 1989-90 to 1994-95 (Index Points)

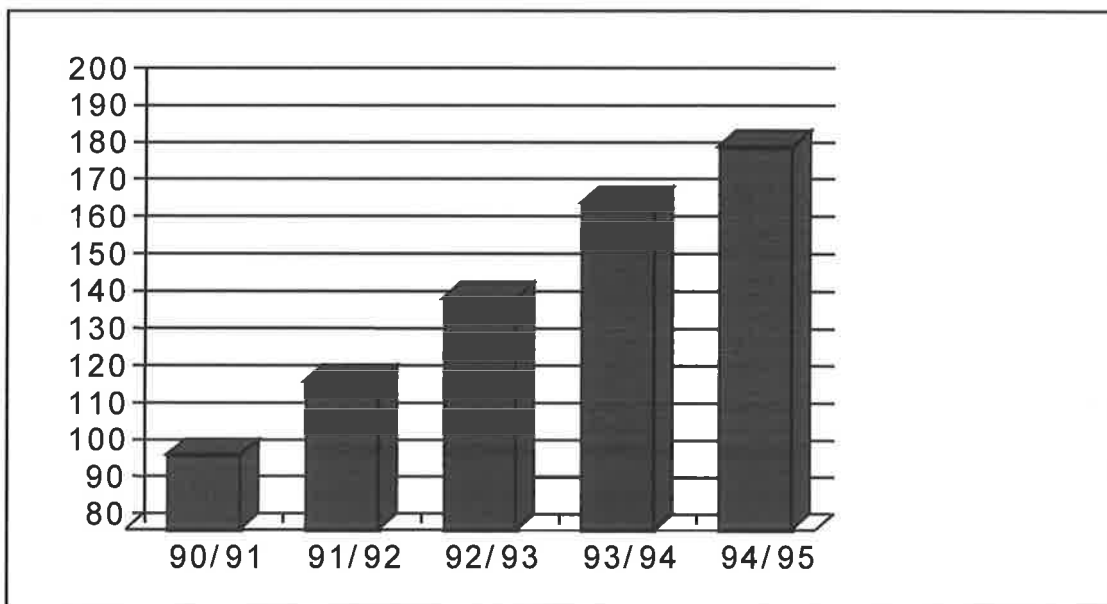


Source: Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1990-91 to 1994-95*, Industry Commission, Canberra, 1996, p.6.

The graphs below indicate that between 1987-88 and 1994-95, labour productivity in GTE's has more than doubled on average.

GTE Labour Productivity 1987-88 to 1992-93 (Index points)

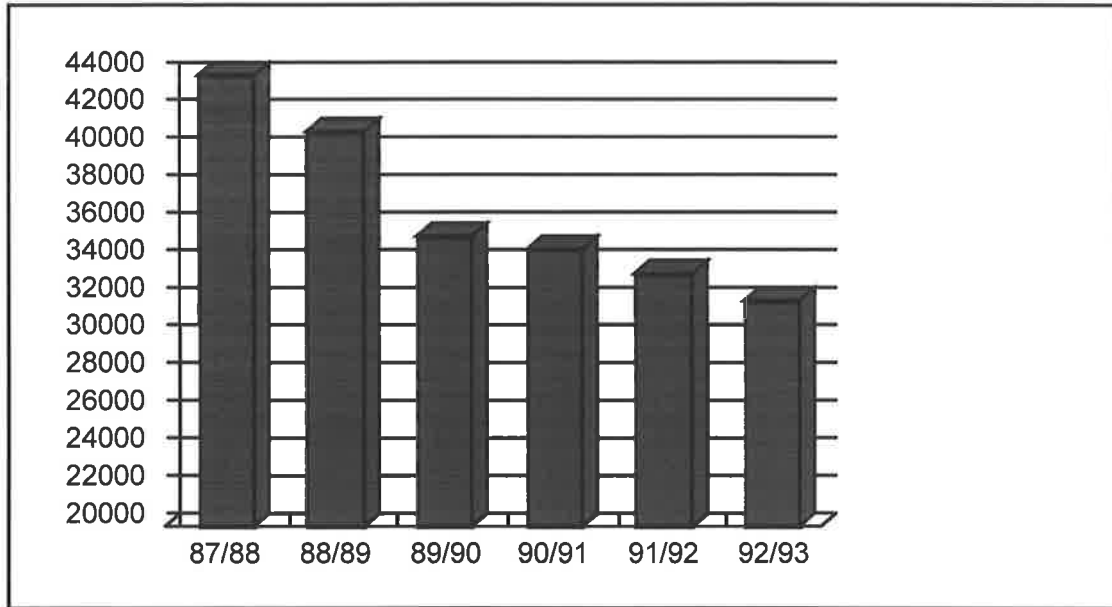
Source: Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1987-88 to 1992-93*, op. cit., p.3.

GTE Labour Productivity 1990-91 to 1994-95 (Index points)

Source: Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1990-91 to 1994-95*, op. cit., p.10.

Real debt levels among GTEs also fell considerably in the period.

Real Debt Levels 1987-88 to 1992-93 (\$m)



Source: Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1987-88 to 1992-93*, op. cit., p.3.

How Rationalist Policies Bring Performance Improvements

Competition is important to achieving competitiveness. Michael Porter's *The Competitive Advantage of Nations* found that domestic rivalry is a key determinant of industry and national competitive advantage. In competitive markets, firms work hard to gain a competitive edge by creating new products and technology, improving quality and producing cost reductions.²²⁵ More specifically, Porter argued: 'Deregulation of competition and privatization of state monopolies are usually spurs to national competitive advantage. They will stimulate rivalry and have ripple effects on linked industries...[provided there is] active domestic rivalry.'²²⁶

Historically, many of Australia's infrastructure services have been provided by public monopolies. The productivity performance of such sectors has often been poor, due to the absence of any competitive threat and the lack of incentive for efficiency, given that increased costs could simply be passed on to the consumer or the taxpayer. Many have performed vastly below world best practice in price and quality, thereby hindering the competitiveness of firms reliant on such provision.²²⁷ For example, a 1994 EPAC report found that, even after the considerable efficiencies achieved in infrastructure sectors, potential productivity gains, defined as the gap between world best practice and the average Australian standard, adjusted for differences in scale, were as follows:

²²⁵ Michael Porter, op. cit., p.117-124 discusses the importance of domestic rivalry.

²²⁶ Michael Porter, op. cit., p.664.

²²⁷ Productivity Commission, *Stocktake of Progress on Microeconomic Reform*, Australian Government Publishing Service, Canberra, 1996, p.73-75; and Bureau of Industry Economics International Performance Indicators Overview (Australian Government Publishing Service, Canberra, 1994), p.76.

Potential Productivity Improvements in Infrastructure Sectors

Sector	Labour Productivity		Capital Productivity	
	favourable estimate	conservative estimate	favourable estimate	conservative estimate
Electricity	30.0	15.0	20.0	10.0
Water	15.0	10.0	23.0	15.0
Transport	10.6	6.5	10.6	6.5
Communication	30.0	15.0	0.0	0.0

Source: Richard Filmer & Dan Dao, *Economic Effects of Microeconomic Reform: Economic Planning Advisory Council Background Paper No.38*, Australian Government Publishing Service, Canberra, 1994, p.15,28.

Competition policies improve performance because, whereas the public monopolist could make consumers pay for inefficiencies by running up debt or charging higher prices, each firm in a competitive market structure must provide low cost, high quality services to survive against competitors.²²⁸

International evidence shows that introducing competition into infrastructure sectors that were previously public monopolies or duopolies has brought improved performance. Infrastructure performance in nations in which competition has been introduced, such as in Japan, the United States, the United Kingdom and New Zealand, has vastly outstripped infrastructure performance in nations in which most infrastructure sectors have remained public monopolies.²²⁹

Introducing competition has also improved infrastructure performance in Australia. A BIE study showed that the level of competition was a key determinant of performance. For example, Australia's road freight sector has the greatest degree of competition of all infrastructure sectors and achieves a performance closest to international best practice, while rail is subject to the least competition and is the worst performer of all Australia's infrastructure sectors.²³⁰

The establishment of competition also improved performance in the airline sector. Under the Two Airline Policy, there was little incentive to lower fares and improve services, and great incentive for tacit collusion to increase profits. As real international fares fell considerably in the period from the 1960s, real domestic fares fell only marginally. Allowing the entry of new competitors, and specifically the shortlived entry of Compass, improved services.²³¹ Compass offered greatly discounted air services and caused Ansett and Australian Airlines to reduce staff by 10 per cent, increase efficiency and offer better services at lower prices.²³² Average fares fell 25 per cent between September 1990 and September 1993. Nearly 18.6 million passengers were carried in 1992-93, which was 23 per cent higher than the record before the introduction of new competition. The Bureau of Transport and

²²⁸ Frederick G. Hilmer, Mark Rayner & Geoffery Taperell, op. cit., p.xxxiii.

²²⁹ Henry Ergas, op. cit., p.158.

²³⁰ Bureau of Industry Economics, *International Performance Indicators: Overview*, op. cit., p.76.

²³¹ Larry Dwyer & Peter Forsyth, ch.11 'The reform of air transport and its impact on tourism' in Peter Forsyth (ed.), op. cit., pp.222-242 at p.225,226.

²³² Industry Commission, *Annual Report 1991-92*, op. cit., p.184,185.

Communications Economics estimated the reform increased economic welfare by \$100 million.²³³

The introduction of competition has also been a success in telecommunications. As in many OECD nations, Australia's public telecommunications monopoly had provided services at costs far above world best practice. Innovation had also lagged considerably behind technical opportunity.²³⁴ The establishment of competition from Optus improved telecommunications performance, as did the need to prepare for full competition from mid-1997. Telstra responded by cutting prices, improving efficiency, boosting product and service innovation and increasing their rate of return substantially.²³⁵ Telecom/Telstra's average number of full-time equivalent employees fell from around 87,000 in 1987-88²³⁶ to around 68,000 in 1994-95. Between 1990-91 and 1994-95, labour productivity more than doubled, real prices fell by more than the statutory requirement of 5.5 per cent per annum, and real payments to government increased 61 per cent.²³⁷ A range of measures also show that efficiency increased and service quality improved.²³⁸ Open competition from July 1997 has further strengthened the industry, with new players providing a range of high quality, cost effective products and services. Similarly, the introduction of competition in Japan, the US and the UK in the 1980s produced lower costs, as well as increased exports, as carriers sought to offset the loss of local market share.²³⁹

In the electricity generation sector, the 'break up' of State monopolies and the establishment of a national grid and a national market, is beginning to produce a more vibrant market. Competition is sparking efficiency improvements and price reductions, as firms upgrade in order to survive and prosper. Those able to generate electricity most efficiently will survive and grow, while poor producers will contract. Already, between 1990-91 and 1994-95, real business prices fell by nearly 15 per cent, despite real payments to government rising from around \$700 million to around \$1650 million (in 1989-90 dollars), while labour productivity rose more than 80 per cent.²⁴⁰ The establishment of a competitive national market in gas generation, also still early in its evolution, can be also be expected to produce major efficiency improvements and cost reductions.

Corporatisation has improved the commercial focus and efficiency of public providers through policies that: vest management in commercial boards; establish

²³³ Richard Filmer & Dan Dao, op. cit., p.2.

²³⁴ Henry Ergas, op. cit., p.152-153.

²³⁵ Rodney Maddock, ch.12 'Microeconomic Reform of Telecommunications: The Long March from Duopoly to Duopoly', pp.243-259 in Peter Forsyth (ed.), op. cit., pp.243-259 at p.258.

²³⁶ Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1987-88 to 1992-93*, op. cit., p.411.

²³⁷ Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1990-91 to 1994-95*, op. cit., p.411.

²³⁸ Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1987-88 to 1992-93*, op. cit., p.410,411.

²³⁹ Paul Twomey, ch.20 'Telecommunications: A vision for the future' in Michael Costa & Michael Easson (eds), op. cit., pp.373-400 at p.387.

²⁴⁰ Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1990-91 to 1994-95*, op. cit., p.30,31,33.

objectives that relate to commercial performance only; establish market pricing and the requirement of a market rate of return; and apply rigorous performance monitoring. Corporatisation also helped to reduce GTE debt from \$44 billion to \$32 billion between 1987-88 and 1992-93²⁴¹ And market pricing should produce further debt reduction. Further, between 1987-88 and 1994-95, real dividends paid or provided for rose from around \$600 million to around \$2.3 billion, while the policy to require tax equivalent payments was yielding almost \$4 billion by 1994-95.²⁴²

Proceeding with investment only where it can achieve market returns should produce improved allocation of investments in infrastructure. Australia's current infrastructure is largely the result of numerous isolated, ad hoc decisions, most of which were made without reference to any overall national strategy, and with insufficient focus on commercial realities. The resulting assistance structure left Australia with a situation in which its least efficient sector, railways, were drawing on \$4 billion in public savings annually²⁴³ and irrigation received \$424 million through cost under-recovery,²⁴⁴ while road transport, the biggest transport sector and the sector most important to manufacturing, got approximately nothing.²⁴⁵

Moving to market pricing and cost recovery will improve economic outcomes over such an irrational infrastructure assistance regime. By matching prices to the costs entailed in providing infrastructure services, market signals will help to ensure services are provided more efficiently. For example, services that are currently provided inefficiently, and require considerable subsidisation, will have to charge much higher prices, improve efficiency or close down. As this occurs, demand will switch to more efficient infrastructure providers. Less resources will be required to provide a given infrastructure service. For example, rather than transporting small amounts of produce through less than container load rail freight services, which have a cost recovery rate of around 24 per cent, market pricing will ensure that such activity occurs through road transport, which can do the same job more cheaply and efficiently.²⁴⁶ Requiring a market return on public infrastructure investments will help to ensure that uneconomic projects are not undertaken. Given that Australia has undertaken numerous uneconomic projects in the past, this is an important step forward in infrastructure policy.

Privatisation can also improve the performance of infrastructure providers - where implemented in appropriate circumstances - for a range of reasons. Firstly, private owners invest their own money and therefore seek maximum quality, efficiency and cost competitiveness in order to avoid bankruptcy and maximise profit. By contrast, there is less discipline for competitive performance in public enterprises because there are no owners seeking to maximise profit. This can mean inefficiency, poor

²⁴¹ Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1987-88 to 1992-93*, op. cit., p.3.

²⁴² *ibid.*, p.2; and Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1990-91 to 1994-95*, op. cit., p.91.

²⁴³ Industry Commission, *Rail Transport Volume 1 Report*, op. cit., p.xiv.

²⁴⁴ Industry Commission, *Rail Transport Volume 1: Report*, op. cit., p.257,258.

²⁴⁵ Bureau of Industry Economics, *International Performance Indicators: Overview*, op. cit., p.11,53,56,57.

²⁴⁶ Industry Commission, *Rail Transport Volume 1: Report*, op. cit., p.xviii.

service, high debt and high prices because all this can simply be paid for by the taxpayer or the consumer.²⁴⁷ Secondly, privatisation prevents politicians doing uneconomic favours for particular regions or sectors through provision of below cost services from public infrastructure providers.²⁴⁸ Finally, public managers often have a range of political and social objectives they must aim to achieve, whereas private sector managers are implored by their owners to maximise economic performance only.²⁴⁹

Economy-Wide Benefits of Infrastructure Performance Improvements

The overall result of infrastructure reform has been reduced costs, improved quality of service, and more efficient provision of infrastructure services. Infrastructure cost improvements can make a significant improvement to the cost competitiveness of Australian firms because the contribution of the costs of infrastructure service inputs to those in final output varies from 10 to nearly 25 per cent across industries.²⁵⁰ Such price reductions should increase the growth and international competitiveness of firms.

By reducing costs in significant areas of the economy, infrastructure reform has made a contribution to achieving the low inflation rates achieved in Australia throughout the 1990s. Low inflation is likely to make some contribution to stimulating investment and increasing national competitiveness.²⁵¹

It is also likely that the reform process will lead to net gains in employment. It is true that there has and will be significant, medium-term gross cuts in employment as infrastructure sectors reduce staff, and regions and sectors reliant on subsidised services experience reduced services and increased prices. However, overall improvements in price and quality achieved by infrastructure services can be expected to increase the competitiveness and growth of firms reliant on such service, leading to a net gain in employment. This is particularly the case because: increasing the efficiency of infrastructure provision will allow a greater amount of services to be provided economically; elimination of inefficient services, such as some rail lines, may lead to increased demand for other services, such as road transport; and adjustment costs, although considerable, will be one-off, while the long-term gains will prevail in perpetuity.²⁵²

Furthermore, improved infrastructure services has assisted - and will continue to assist - restructuring by assisting the growth of those firms and sectors vital to national affluence. For example: cheaper, better aviation services are of great importance to Australia's large, competitive and high exporting tourist sector,²⁵³

²⁴⁷ Chris Strong, 'Key Owner Needs and the Electricity Industry', pp.63-67 in ch.7 'Privatisation' in Chris Jones, Chris James & Andrew Norton (eds), *op. cit.*, pp.62-77 at p.64.

²⁴⁸ Chris Strong, *op. cit.*, p.64.

²⁴⁹ Simon Domberger, *op. cit.*, p.166.

²⁵⁰ Bureau of Industry Economics, *International Performance Indicators: Overview*, *op. cit.*, p.7-11.

²⁵¹ Richard Filmer & Dan Dao, *op. cit.*, p.34.

²⁵² *ibid.*, p.7.

²⁵³ Larry Dwyer & Peter Forsyth, *op. cit.*, p.224,225,231-234,236-240.

ETMs will benefit from high quality, low cost telecommunications services and cheaper electricity, gas and transport; and exporters will benefit significantly, given their particular reliance on infrastructure services.

Finally, government savings achieved through rationalist cost recovery policies create greater scope for beneficial economic policymaking. Government savings can be directed to reducing government debt, reducing taxation of productive business investment, and/or increasing spending on policy initiatives designed to increase competitiveness.

Limitations of Free Market Infrastructure Reform

The key limitation of infrastructure reform lies in its failure to significantly propel economic and employment growth and improve national competitiveness. Even strident rationalists admit that infrastructure reform will have a minimal impact on reducing unemployment. For example, the IC 1989-90 Annual Report found that reform of the transport sectors, post and telecommunications, electricity supply, water services and contracting out more services provided by government would increase aggregate employment by only 0.6 per cent.²⁵⁴ Similarly, Dao and Filmer admit that '...the overall or net effects of reforms on total employment has been found to be minor...'²⁵⁵ Meanwhile, Gregory concluded that '...it is not clear the underlying growth rate of the economy will change that much.'²⁵⁶ Free market infrastructure reform also does little to remove the external constraint to employment growth because it generally helps imports as much as exports.

An important limitation of rationalist infrastructure reform is that - like tariff cutting - it is focused largely on reducing costs, when the key to national competitive advantage is the capacity to produce an innovation-driven economy. While infrastructure reform is worth pursuing for the benefits it does provide, it, like the other components of the rationalist agenda, does not focus significantly on these keys to national competitive advantage, restructuring and employment growth.

Weaknesses of Free Market Infrastructure Reform

The Role of Government in Infrastructure Provision

There are a number of reasons to suspect that the rationalist approach to infrastructure policy could lead to under-investment in infrastructure, meaning that the private sector has inadequate infrastructure support to maximise growth and competitiveness. Firstly, rationalists are focused on reducing government involvement in the economy and reducing government outlays. Rationalists in Australia have sacrificed spending on industry and infrastructure to achieve their more coveted goal - the reduction in the size of government - which they believe is critical to the achievement of growth and competitiveness. Too little consideration is

²⁵⁴ Industry Commission, *Annual Report 1989-90*, op. cit., p.33.

²⁵⁵ Richard Filmer & Dan Dao, op. cit., p.2.

²⁵⁶ R.G. Gregory, ch.15 'An overview of microeconomic reform' in Peter Forsyth (ed.), op. cit., p.312.

given to whether there is sufficient government investment to maximise growth. Perhaps this is why the White Paper argued that '...there was considerable capacity for regions to invest in infrastructure from their own resources...' ²⁵⁷ This approach seeks to limit the Federal Government's responsibility for investing in public infrastructure.

Secondly, rationalist policies may lead to an under-investment in infrastructure because of their view that public investment should not occur unless market returns are very likely to be gained from direct users. Labor's Employment White Paper stated that '...infrastructure projects should only proceed if they are proved to be economically viable.' ²⁵⁸ Given the highly conservative rationalist approach to government investment, combined with the difficulty of predicting returns on infrastructure investment, such a policy could lead to insufficient public infrastructure investment to maximise growth and facilitate restructuring and competitiveness.

Rationalists also fail to consider that infrastructure investments create revenues in ways other than payment by direct, identifiable users. They can also assist to reduce the need for outlays. This can occur in a number of ways: Firstly, infrastructure investments can produce important externalities. For example, higher quality roads can help to reduce the \$5 billion spent annually on 'mopping up' after road accidents, ²⁵⁹ and can also bring improved transport of goods. Secondly, infrastructure investment can assist in raising private investment levels. The availability of infrastructure is an important determinant of growth. No firm will be attracted to a nation or a regional area with poor roads and little access to telecommunications, electricity, gas, water, rail or port facilities. International and domestic firms can be induced to invest through the availability of quality, low cost infrastructure services. Waiting for private sector demand to rise to high levels before making infrastructure investments may not be the best way to maximise growth. Finally, the employment generated by sensible infrastructure investment can facilitate lower expenditure on welfare benefits, and on dealing with the many ills associated with unemployment, such as declining health, and a greater propensity for crime. Infrastructure investment can produce net employment growth in two ways. Firstly, it creates direct employment. Studies indicate that an additional \$1 billion (in 1990 prices) in investment in infrastructure would create 25,000 jobs. ²⁶⁰ Secondly, investments in economic projects can produce net employment by supporting an increase in private sector activity that outweighs the reduction in welfare caused by the costs of the investment.

Australia has neglected public infrastructure investment during the rationalist era. As shown on the tables below, between 1983-84 and 1995-96, gross fixed capital

²⁵⁷ *Working Nation: Policies and Programs*, op. cit., p.170.

²⁵⁸ *ibid.*, p.167.

²⁵⁹ Caucus Task Force, 'Growth Plus' Equals the Employment Challenge: A Positive Agenda for Change - Submission to the Prime Minister's Expert Committee on the Future of Employment and Unemployment, Unpublished, 1993, p.36.

²⁶⁰ Australian Council of Trade Unions, *A Program Towards Full Employment: The ACTU's Program for Sustainable Employment and Jobs Growth for the 1990s and Beyond*, Australian Council of Trade Unions, Melbourne, 1993, p.31.

formation by public enterprises fell from 19.9 per cent to 11.0 per cent of total gross fixed capital formation, or from 4.5 to 2.2 per cent of GDP (I). Over the same period, total public gross fixed capital formation fell from 31.9 to 20.0 per cent of total gross fixed capital formation, or from 7.2 to 4.0 per cent of GDP (I).²⁶¹ Given that the level of investment is a key determinant of economic growth, it may be that the dramatic reduction in government investment in economic infrastructure is impeding the capacity of the economy to grow.

Gross Fixed Capital Expenditure (GFCE)

Date	Public Enterprises		General Government		Total Public		Total GFCE \$m
	\$m	% of total GFCE	\$m	% of total GFCE	\$m	% of total GFCE	
83-84	8,839	19.9%	5,313	12.0%	14,152	31.9%	44,325
84-85	8,935	17.5%	6,168	12.1%	15,103	29.6%	51,016
85-86	10,828	18.3%	7,220	12.2%	18,084	30.5%	59,303
86-87	11,295	17.5%	7,807	12.1%	19,102	29.6%	64,475
87-88	9,923	13.7%	7,516	10.4%	17,439	24.1%	72,354
88-89	10,386	12.2%	7,565	8.9%	17,951	21.1%	85,153
89-90	13,023	14.6%	8,629	9.6%	21,652	24.2%	89,473
90-91	12,009	14.8%	8,781	10.8%	20,790	25.6%	81,337
91-92	11,781	15.2%	8,809	11.4%	20,590	26.6%	77,348
92-93	10,337	12.6%	9,188	11.2%	19,525	23.8%	81,897
93-94	9,500	10.8%	8,603	9.8%	18,103	20.5%	88,185
94-95	11,448	11.7%	8,941	9.2%	20,389	20.9%	97,458
95-96	10,803	11.0%	8,906	9.0%	19,709	20.0%	98,429

Source: Figures for 1984-85 to 1995-96 are from Australian Bureau of Statistics, *Australian National Accounts: National Income, Expenditure and Product 1995-96*, Cat. no.5204.0, p.60. Figures for 1983-84 from Australian Bureau of Statistics, *Australian National Accounts: National Income, Expenditure and Product 1993-94*, Cat. no.5204.0, p.60.

²⁶¹ The figures for 1984-85 to 1995-96 are from Australian Bureau of Statistics, *Australian National Accounts: National Income, Expenditure and Product 1995-96*, Cat. no.5204.0, p.15,60. The figures for 1983-84 are from Australian Bureau of Statistics, *Australian National Accounts: National Income, Expenditure and Product 1993-94*, Cat. no.5204.0, p.15,60.

Gross Fixed Capital Expenditure (GFCE)

Date	Public Enterprises		General Government		Total Public		GDP(I) \$m.
	\$m.	% of GDP (I)	\$m.	% of GDP (I)	\$m.	% of GDP (I)	
83-84	8,839	4.5%	5,313	2.7%	14,152	7.2%	195,830
84-85	8,935	4.1%	6,168	2.8%	15,103	7.0%	217,129
85-86	10,828	4.5%	7,220	3.0%	18,084	7.5%	240,757
86-87	11,295	4.3%	7,807	2.9%	19,102	7.2%	264,660
87-88	9,923	3.3%	7,516	2.5%	17,439	5.8%	299,340
88-89	10,386	3.1%	7,565	2.2%	17,951	5.3%	339,275
89-90	13,023	3.5%	8,629	2.3%	21,652	5.8%	370,188
90-91	12,009	3.2%	8,781	2.3%	20,790	5.5%	378,716
91-92	11,781	3.0%	8,809	2.3%	20,590	5.3%	387,056
92-93	10,337	2.6%	9,188	2.3%	19,525	4.8%	404,791
93-94	9,500	2.2%	8,603	2.0%	18,103	4.2%	429,778
94-95	11,448	2.5%	8,941	2.0%	20,389	4.5%	457,664
95-96	10,803	2.2%	8,906	1.8%	19,709	4.0%	489,082

Source: Figures for 1984-85 to 1995-96 from Australian Bureau of Statistics, *Australian National Accounts: National Income, Expenditure and Product 1995-96*, Cat. no.5204.0, p.15,60. Figures for 1983-84 from Australian Bureau of Statistics, *Australian National Accounts: National Income, Expenditure and Product 1993-94*, Cat. no.5204.0, p.15,60.

This is the primary weakness of rationalist infrastructure reform. Rationalists are focused on establishing a market allocation of resources, when the key policy requirement is to overcome the massive failure by the market to produce the infrastructure necessary to maximising growth and competitiveness. A policy prescription to establish a market allocation of resources is of minimal utility when the activity is primarily undertaken by government. Even at 1994, governments owned approximately 90 per cent of all infrastructure assets and infrastructure accounted for one third of Australia's capital stock and a quarter of Australia's new investment.²⁶² Rationalists are largely silent on the key infrastructure policy question, namely: What mix and level of government spending in infrastructure can maximise national economic growth and competitiveness? Governments can make massive (or small) investments in infrastructure and charge the public market prices and achieve market rates of return. The level, type and quality of public investment in infrastructure, by determining the quality, availability and cost competitiveness of infrastructure services to industry, is an important cause of the level of growth and competitiveness of the Australian economy.

Rationalist policymakers have given little consideration to this question and their policy framework provides little guidance on government infrastructure investment. Again we are back to a key weakness of rationalist policy making in virtually every area of the economy. Because rationalists generally fail to acknowledge market failures - and are almost entirely focused on removing government involvement in the economy and establishing a market allocation of resources - they fail to consider ways in which government can increase growth and competitiveness. An economic theory that seeks to deny the importance of the state to economic development can provide little guidance on the level and type of government investment needed to maximise growth and competitiveness.

²⁶² Bureau of Industry Economics, *International Performance Indicators: Overview*, op. cit., p.7-11.

This is a crucial flaw in the rationalist approach because the modern history of Western economies shows that the market has failed to provide sufficient road, rail, port, electricity, gas, water, education, health and telecommunications services to maximise growth. The government has had to play the key role in the provision of such infrastructure, particularly when nations are industrialising.²⁶³

Sheridan and Chapman have argued that public investment in infrastructure played a crucial role in the development of Australia by encouraging increased domestic and foreign investment in Australia, thereby raising the level of economic growth. For the first half of the century, Australia's public sector generally accounted for at least 50 per cent of capital formation. Interestingly, many infrastructure investments were subsidised, in full knowledge that they could not be financially justified on the basis of the existing size and pattern of private sector activity. Instead, they were made on the basis that they would generate increased private sector usage, which would create greater demand and thereby bring financial viability. This 'nation building' approach arguably increased the rate of national development and economic growth.²⁶⁴

The importance of infrastructure investment remains in modern times. New growth theory suggests that public infrastructure investment can increase growth, restructuring and competitiveness because: it can increase the return on private investments, thereby triggering further investment over the medium-term; it can lead to clusters of firms with a common interest in production, technology and markets (for example, infrastructure investment could spark clusters of resource based value adding firms in regional areas); and it can increase the productivity of private investments. Greater infrastructure investment could also assist in reducing the transitional employment losses that flow from free market reforms. Rather than simply retrenching well over one hundred thousand employees from infrastructure sectors, the government could have redeployed many of the workers in vital infrastructure projects.

A range of studies have found that public infrastructure investment can increase economic growth. For example, Easterly and Rebelo, in a study published in 1993, using data for 119 nations, concluded that general government investment is positively correlated with economic growth, with a co-efficient of about 0.4, and positively correlated with private investment, with a co-efficient near one.²⁶⁵ Munnell (1990) covered 48 states in the United States over the period 1970 to 1986 and found that those states that invested more in infrastructure tended to have greater output, private investment and employment growth. The study found that the public investment often came before the increase in economic activity, thereby suggesting causation. Barro (1989) carried out cross-country analysis of post-war growth in 72 countries and found that successful nations tended to have high public investment as

²⁶³ Steven S. Cohen & John Zysman, *op. cit.*, p.222.

²⁶⁴ K. Sheridan & P. Chapman, ch.2 'Australia's economic achievement - Comparisons with Japan' in Kyoko Sheridan (ed.), *op. cit.*, pp.5-26 at p.16,18,20.

²⁶⁵ William Easterly & Sergio Rebelo, 'Fiscal policy and economic growth: An empirical investigation', *Journal of Monetary Economics*, vol.32, 1993, pp.417-458 at p.430-432.

a percentage of GDP.²⁶⁶ Michael Porter's study found: 'Upgrading a nation's industry depends on a modern and improving infrastructure. This is particularly true in advanced transportation, logistics, and telecommunications, all integral to introducing modern technologies and to competing in international markets.'²⁶⁷ Lester Thurow has even argued that: 'In many cases to spread and accelerate economic development, infrastructure (transportation, communications, electrification) has to be built ahead of the market...'²⁶⁸

Similar findings have been made in the Australian context. Otto and Voss, using data from 1967-68 to 1989-90, found that public investment is positively correlated with private sector growth, with a co-efficient of around 0.4.²⁶⁹ Alesina, Gruen and Jones noted that a disproportionate share of the Labor Government's cuts to public spending in the period 1983-84 to 1988-89 had been borne by public investment and, after reviewing the literature demonstrating the importance of public investment to economic growth,²⁷⁰ concluded that '[c]utting public investment spending may have [had] serious adverse effects on labour productivity and long-term economic growth.'²⁷¹

The availability of high quality, low cost road, rail, air, port, shipping and telecommunications infrastructure services is also an important determinant of the capacity to export.²⁷² The LEK Partnership study of emerging service exporters analysed the common features of nations with a strong export performance and found that the infrastructure services were a critical input. LEK surveys of Australian service exporters also revealed that they believed transport and telecommunications were important determinants of success. Accordingly, they recommended increased investment in infrastructure and broadened application of infrastructure development bonds.²⁷³

Perhaps the Federal Government should consider adopting the ideas of John Maynard Keynes, who suggested that government establish a capital budget, separate to the current spending budget, with capital investment ranging between 7.5 and 20 per cent of national income. Keynes argued that such services would be fully paid for, so that the capital budget would be balanced over time. He believed

²⁶⁶ The latter two studies were outlined in Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 1: Report*, op. cit., p.168,170,172. The citation details for these studies are: A. H. Munnell 'How does public infrastructure affect regional economic performance?' in A. H. Munnell (ed.), *Is There a Shortfall in Public Capital Investment? Reserve Bank of Boston Conference Series No.34*, Reserve Bank of Boston, Boston, Massachusetts, USA, 1990; and R. J. Barro, *A Cross-Country Study of Growth, Saving and Government: National Bureau of Economic Research Working Paper No.2855*, National Bureau of Economic Research, Cambridge, Massachusetts, USA, 1989.

²⁶⁷ Michael Porter, op. cit., p.637.

²⁶⁸ Lester Thurow, *The Future of Capitalism: How Today's Economic Forces Will Shape Tomorrow's World*, Allen and Unwin, St Leonards, New South Wales, 1997, p.289.

²⁶⁹ Glenn Otto & Graham M. Voss, 'Public capital and private sector productivity', *The Economic Record*, vol.70, no.209, pp.121-132 at p.130.

²⁷⁰ Alberto Alesina, David W. R. Gruen & Matthew T. Jones, 'Fiscal adjustment, the real exchange rate and Australia's external imbalance', *The Australian Economic Review*, 3rd Quarter 1991, pp.38-51 at p.40-43.

²⁷¹ *ibid.*, p.50.

²⁷² Report of the Committee for Review of Export Market Development Assistance, op. cit., p.32,91.

²⁷³ LEK Partnership, op. cit., p.50,94,95,97,107.

such efficient public investment could correct the tendency for the free market to produce high structural unemployment and major cyclical swings in economic activity.²⁷⁴

As the Kelty report recommended, Australia needs strategic modernisation and development of its infrastructure base through increased private and public investment and user charges.²⁷⁵ Caution is certainly required to ensure that only projects that will increase economic welfare go ahead. There is little doubt that many ill-considered projects in the past have served to reduce Australia's economic prosperity. However, rationalist policy makers have spent more than a decade underspending on infrastructure. This has left a situation in which many badly needed, growth enhancing projects should now be undertaken. This provides a major opportunity for Australia to provide employment, assist restructuring and improve national competitiveness through increased investment in infrastructure.

Towards the end of the Labor Government's reign, opportunities for growth enhancing investment were available in every infrastructure sector. For example, the Allen Consulting Group found that additional investments in key parts of existing road infrastructure would produce high economic returns by increasing the productivity of domestic and export production.²⁷⁶ A number of reports identified specific projects likely to be welfare enhancing,²⁷⁷ such as the linking of the national highway system to all major ports, building dual carriageway roads on key parts of Australian roads to improve safety and transport efficiency; and upgrading arterial roads from the centres of Australia's major cities to connect with major highways.²⁷⁸ The Taskforce on Regional Development referred to a study by Dr Vince Fitzgerald, which estimated that every \$1 billion sensibly invested in arterial roads could bring an \$810 million increase in GDP within a decade, while every \$1 billion sensibly invested in freeways could bring a \$620 million increase in GDP within a decade.²⁷⁹

In all other infrastructure sectors, part of the reason for infrastructure performance being substantially below international best practice is inferior capital productivity. Investment in world best technology and equipment can play a role in redressing this capital productivity weakness.²⁸⁰

In the electricity sector, the speedy completion of a national transmission grid and structural separation of state monopolies to produce a competitive national generation market would increase productivity. In gas, pipelines have been built to

²⁷⁴ J. A. Kregel, ch.3 'Budget deficits, stabilisation policy and liquidity preference: Keynes's post-war policy proposals' in Fausto Vicarelli (ed.), *Keynes's Relevance Today*, MacMillan, London, Great Britain, 1985, pp.28-50 at p.30,32,33,38. This idea was also suggested in Taskforce on Regional Development, *Developing Australia: Volume 1*, op. cit., p.5.

²⁷⁵ Taskforce on Regional Development, *Developing Australia Volume 1*, op. cit., p.5,6.

²⁷⁶ Bureau of Industry Economics, *International Performance Indicators: Overview*, op. cit., p.60.

²⁷⁷ Bureau of Industry Economics, *International Performance Indicators: Overview*, op. cit., p.60,61. Australian Council of Trade Unions, *A Program Towards Full Employment*, op. cit., p.35,36.; and Taskforce on Regional Development, *Developing Australia: Volume 1*, op. cit., p.6,27.

²⁷⁸ Taskforce on Regional Development, *Developing Australia: Volume 1*, op. cit., p.6,27.

²⁷⁹ *ibid.*, p.26. The citation details of the study were not provided.

²⁸⁰ Bureau of Industry Economics, *International Performance Indicators: Overview*, op. cit., p.76,77.

transport the gas from the source to capital cities, but many regional areas do not have access to the gas distribution network. Given the importance of resource based value adding, careful consideration of strategic investments in this sector should occur. And of course, as with electricity, the breakdown of state monopolies and the establishment of a national gas market would lead to increased investment, greater productivity and lower costs.²⁸¹

Investment to create high quality airports would support the fast growing tourist sector. Quickly building a third airport for Sydney and the rapid development of Brisbane airport would have improved economic welfare in this way.²⁸² Unfortunately, the Labor Government was primarily focused on privatising its 23 airports, leaving the possibility that many of Australia's 18 loss making airports will close or charge higher prices.

Investment in telecommunications may be particularly important for a number of reasons. Firstly, telecommunications is perhaps the most critical infrastructure sector because its a widely used, generic input, important to the competitiveness of virtually all firms in the economy.²⁸³ As Chalmers Johnson wrote:

In all of its many forms, including office automation, instantaneous transmission of data, and the diagnosis of malfunctions in human and man-made data systems, telecommunications are probably the greatest single source of gains in productivity at work today.²⁸⁴

Secondly, there is also strong potential for major export growth in telecommunications itself. World exports of telecommunications services are growing very quickly and forecasts of demand for telecommunications services are very high for at least two generations.²⁸⁵ Global economic and export growth in telecommunications can be expected to continue because its growth is underwritten by rapidly spawning new products and services, such as cordless phones, pay TV, fibre optic cables, modems and the Internet. Australia's exports of telecommunications equipment are significant and growing strongly, reaching \$711 million in 1995-96, with a five year average annual growth rate of 20 per cent.²⁸⁶ The potential for telecommunications exports to Asia to grow is substantial because the Asian telecommunications market is expected to grow rapidly in the next 20 years. Australia's regional position, the increasingly Eurasian mix of its population, and the depth and sophistication of its home services market relative to its Asian neighbours, mean that quality telecommunications could underwrite a services export boom to

²⁸¹ Taskforce on Regional Development, *Developing Australia: Volume 1*, op. cit., p.62,63.

²⁸² *ibid.*, p.28.

²⁸³ Steven S. Cohen & John Zysman, op. cit., p.232,233.

²⁸⁴ Chalmers Johnson, ch.5 'MITI, MPT and the Telecom wars: How Japan makes policy for high technology' in Chalmers Johnson, Laura D'Andrea Tyson & John Zysman (eds), *Politics and Productivity: The Real Story of Why Japan Works*, Ballinger Publishing Company, Cambridge, Massachusetts, USA, 1989, pp.177-240 at p.185.

²⁸⁵ *ibid.*, p.185.

²⁸⁶ Department of Foreign Affairs and Trade, *Composition of Trade Australia 1995-96*, Department of Foreign Affairs and Trade, Canberra, 1996, p.24.

Asia.²⁸⁷ Australia's telecommunications sector can also be expected to achieve strong export growth because it is reasonably competitive. The LEK study found that nearly 80 per cent of service exporters stated that telecommunications is a positive part of their business environment.²⁸⁸

A different approach may be needed to encourage telecommunications because a largely private, competitive market is emerging. Given the prevalence of emerging products in telecommunications and its capacity for export growth, government support could focus on encouraging R&D, technology uptake, skills development and export marketing amongst indigenous firms in the sector.

Considerable investment is also needed to protect and rehabilitate the natural environment. For example, in the Murray-Darling Basin, there are major problems with water quantity and quality, and water management practices. If unchecked, waterway pollution could threaten the future of key sectors, and, in turn, certain metropolitan areas, as well as numerous regions such as Victoria's Goulburn Valley and South Australia's Murray Bridge. Major investment is needed to restore health to Australia's key water system.²⁸⁹ Numerous other investments in our natural environment, such as in land rehabilitation through Landcare Programs, are also badly needed.²⁹⁰

Even in rail, the most subsidised and inefficient infrastructure sector, there are considerable opportunities for profitable investment. Ensuring all economic rail lines have good linkages with ports can benefit exporters. Very fast train projects between certain capital cities, such as a Sydney-Canberra-Melbourne service, could achieve market returns and provide efficient passenger services to the great benefit of Australia's tourist sector.²⁹¹ Long-standing proposals by the private sector have only been prevented by a lack of tax concessions.²⁹² It is also possible that rail links between capital cities and Darwin may be useful in facilitating exports to Asia.

Thus, the fact that so much economic public investment remained yet to be completed at the end of the Labor Government's reign, shows that in the rationalist era, too little infrastructure investment occurred to maximise growth, restructuring and competitiveness. That the Kelty report could - in 1994 - argue that Australia's ports should be connected to road and rail links,²⁹³ shows how much welfare enhancing investment remains to be completed.

This situation provides a major opportunity for Australia to provide employment, drive restructuring and improve national competitiveness through infrastructure

²⁸⁷ Paul Twomey, *op. cit.*, pp.373-400 at p.379.

²⁸⁸ LEK Partnership, *op. cit.*, p.89.

²⁸⁹ Taskforce on Regional Development, *Developing Australia: Volume 1*, *op. cit.*, p.47-51.

²⁹⁰ *ibid.*, p.11,51.

²⁹¹ Rail Industry Council, *Rail into the 21st Century: A Rail Industry Council Discussion Paper*, Australian Government Publishing Service, Canberra, 1990, p.350 suggests this reform; and Taskforce on Regional Development *Developing Australia, Developing Australia: Volume 1*, *op. cit.*, p.7,28 also suggests the establishment of very fast train connections between Melbourne, Sydney, Canberra and Brisbane by 2000.

²⁹² Jenny Stewart, *The Lie of the Level Playing Field*, *op. cit.*, p.222.

²⁹³ Taskforce on Regional Development, *Developing Australia: Volume 1*, *op. cit.*, p.7.

investment. Such infrastructure investment could occur in full compliance with the rationalist prescription to charge market prices and get a market return on investments.

The vital role of government in identifying opportunities for profitable infrastructure investment may have been neglected because rationalists: are focused on market reforms, not public investment; and are opposed to national planning of infrastructure investment. Rationalists appear to support the devolution of investment decisions to numerous, largely private firms within each sector, without any co-ordination with other firms in the sector, nor with the activities of related sectors. For example, the IC report on port authorities recommended: 'Investment decisions should be the responsibility of individual port authorities acting in a fully commercial manner. There should be no national control or planning of investment.'²⁹⁴

As infrastructure services are primarily provided by government, it is government that must identify key priorities for investment. Theoretically, government could make a range of investments in infrastructure and get a market return through mechanisms such as tolls or user charges. The key is to focus investments in areas that will bring the greatest returns. An activist government approach can not only enhance private sector activity generally, but can also foster restructuring by focusing investment on infrastructure sectors, such as transport and telecommunications, where the services encourage exporting, and exports of ETMs and high value-added services in particular.

National planning is also needed to ensure the co-ordination of infrastructure investments across three tiers of government, in numerous government departments and in numerous sectors. Initiatives in one sector, for example roads, affect the demand for services, and the necessity for investment in other sectors, such as rail and air transport. Active government planning can ensure that the most efficient methods are used to achieve particular needs. Unfortunately, throughout the twentieth century, State Governments have often undertaken infrastructure investments without co-ordination with their counterparts in other states. It was this approach that led to three different railway gauges and the organisation of electricity supply on a State by State basis.²⁹⁵

There is still insufficient co-ordination between State Governments, let alone between Federal, State and Local Governments, and across the range of government departments.²⁹⁶ There is a need for a national body to be established to provide for national co-ordination of research, planning and investment by Federal, State and Local Governments. Without national planning and research in all areas of infrastructure provision, there is a danger that public infrastructure investment will be unco-ordinated and inefficient, as well as insufficient to maximise the growth of the private sector.

²⁹⁴ Industry Commission, *Port Authority Services and Activities*, op. cit., p.191.

²⁹⁵ Simon Domberger, op. cit., p.167,168.

²⁹⁶ Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 1: Report*, op. cit., p.183-185.

Activist government policies could also usefully encourage the trend towards private sector provision of infrastructure. Private projects are sometimes better managed and more efficiently completed than many public projects.²⁹⁷ To encourage private investment, the Federal Government could: review the rules governing Infrastructure Bonds and Pooled Development Funds to establish whether they can become a worthwhile mechanism for encouraging private sector investment in infrastructure; and review its tax treatment of infrastructure investments more generally, which compares unfavourably with many OECD nations. Australia's tax treatment of infrastructure investments has played a role in delaying or preventing some infrastructure projects - such as the very fast train project - from proceeding.²⁹⁸

Structural Unemployment

A key weakness of the free market infrastructure reform agenda is that - while it may produce net employment gains - it also produces significant gross employment dislocation, much of which involves structural, long-term unemployment. It is, of course, acknowledged that much of the dislocation is a by-product of the process of achieving greater efficiency and lower costs. However, the structural dislocation caused remains a major disadvantage of free market infrastructure policies.

Free market infrastructure reform produces significant dislocation for a number of reasons.

Elimination of subsidies will produce dislocation. For subsidised services, market pricing requires that, other things being equal, prices have to be raised to cover costs and a market return on capital, or the service has to be terminated. The result is that some workers providing subsidised services will be sacked, as services are terminated or reduced, or as demand falls in response to price rises.

Competitive neutrality policies exacerbate these pressures because, under such policies, GBEs are losing: their immunity from various taxes and charges; government guarantees on their debts; immunity from various regulatory requirements; concessional interest rates on loans; effective immunity from bankruptcy; exemption from the TPA; and exemption from having to pay dividends to government (in the large majority of cases).²⁹⁹ This is producing higher costs for GBEs, which is, in turn, creating pressures for higher prices and/or the termination of subsidised services, leading to further employment losses.

The magnitude of this dislocation has been significant because, as Ruthven estimated in 1994, the return on investment in GBEs was only two-thirds of the private sector performance.³⁰⁰ In some instances, the dislocation has been particularly pronounced. For example, as the IC 1991 rail report noted, the sector is moving to market pricing

²⁹⁷ Henry Ergas, *op. cit.*, p.147-165 at p.160.

²⁹⁸ V. W. Fitzgerald, *Reform of Australia's Tax System: Integrating the Agenda - A Paper presented at the National Tax Reform Summit: Correcting the Balance at the National Press Club in Canberra, 3-5 October 1996*, Unpublished, 1996, p.11,12.

²⁹⁹ Frederick G. Hilmer, Mark Rayner & Geoffery Taperell, *op. cit.*, p.296.

³⁰⁰ Phil Ruthven, 'White paper draws a costly blank on jobs', *The Australian Financial Review*, 5 May 1994, p.A6.

from a position in which it covered only around 60 per cent of its costs³⁰¹ and drew on public sector savings by \$4 billion or more each year.³⁰² Market policies have meant that many services have been terminated, while others have survived with higher prices, but lower demand. Some sectors have and will be particularly affected, such as less-than-car-load(LCL) freight, which had only covered approximately 24 per cent of its costs.³⁰³

Subsidies provided via under-recovery of irrigation costs amounted to a massive \$424 million in 1989-90. Over \$50 billion in capital is utilised to provide water sewerage and drainage services, much of which the IC has described as '[e]xcessive investment.'³⁰⁴ Market pricing from this position would require, other things being equal, average price rises of between 50 and 470 per cent in various regions.³⁰⁵ Of course, in reality, market pricing will lead to the closure of much of Australia's irrigation infrastructure. As the IC admitted: 'The inability to cover all costs in water charges (because it would render the use of water unprofitable) casts doubt on the viability of the States irrigation systems.'³⁰⁶ Dislocation is particularly likely because public irrigation schemes are ageing and require much new investment, but the funds needed to provide for replacement costs and other necessary investment does not exist.³⁰⁷

Dislocation has also been significant in electricity because it has been moving to market pricing from a situation in which, at 1989-90, cost recovery by State electricity authorities was 78 per cent in Queensland, 84 per cent in Victoria and SA, 80 per cent in NSW, and 102 per cent in WA.³⁰⁸ Similarly, gas authorities have not traditionally covered depreciation costs, nor a rate of return, and have provided a number of CSOs, such as uniform pricing and pensioner rebates,³⁰⁹ as well as subsidies to the rural sector. Public gas utilities have also been exempt from government taxes and charges and from the TPA.³¹⁰ Overall, dislocation has and will be significant because the great majority of infrastructure sectors have had to move to market pricing from a position of significant subsidy.

³⁰¹ Peter Forsyth, ch.9 'Achieving reform in land transport: Land transport and the transport sector in general' in Peter Forsyth (ed.), *op. cit.*, pp.179-203 at p.185.

³⁰² Industry Commission, *Rail Transport Volume 1: Report*, *op. cit.*, p.xiv.

³⁰³ This figure is from the Railway Industry Council Report of 1990 and is provided in Industry Commission, *Rail Transport Volume 1: Report*, *op. cit.*, p.14.

³⁰⁴ Industry Commission, *Water Resources and Water Waste Disposal*, *op. cit.*, p.2.

³⁰⁵ For example, Industry Commission, *Water Resources and Water Waste Disposal*, *op. cit.*, p.41,42 notes that the NSW Department of Water Resources (1990) estimated that market pricing would involve 50 per cent increases in prices for irrigation, the MIA Council of Horticultural Associations estimated that a 5 per cent return on capital would require a 250 per cent increase in irrigation prices and the Queensland Government estimated that a 4 per cent real rate of return would require a 470 per cent increase in irrigation water prices.

³⁰⁶ Industry Commission, *Water Resources and Water Waste Disposal*, *op. cit.*, p.322,323.

³⁰⁷ *ibid.*, p.6,7,203.

³⁰⁸ Industry Commission, *Energy Generation and Distribution Volume 2: Report*, *op. cit.*, p.42,171,173.

³⁰⁹ *ibid.*, p.171,172.

³¹⁰ Industry Commission, *Energy Generation and Distribution Volume 1: Summary and Recommendations*, *op. cit.*, p.1-2,23,25-27.

Introducing competition is also producing employment dislocation as public monopolies lose market share to competitors. For example, State public monopolies in electricity and gas have undergone, or may soon face, structural separation, privatisation and exposure to a national market. While this will improve efficiency as efficient producers expand, there will be significant localised employment dislocation for inefficient generators and distributors that had relied on their state monopoly to remain in business. In telecommunications, the move to a duopoly, and then open competition from July 1997, has and will produce employment dislocation, as Telstra progressively loses market share to competitors. While Telstra is faring well at present and will have the advantage of operating in a sector experiencing rapid product innovation and sales growth, pessimistic estimates suggest that Telstra's employment could fall from it's late 1980's peak of 90,000 to 30,000.³¹¹ The establishment of competition in other sectors will also produce dislocation in the same way.

Privatisation will also produce dislocation, where employees in public enterprises are replaced by private sector firms. This has occurred, and may continue to occur, through privatisation in sectors such as electricity, gas, water, rail, aviation and ports. Such dislocation has and will be increased through contracting out. For example, the IC have recommended that public port authorities divest 'non-core activities', such as terminal operation and stevedoring, towage, pilotage, vessel repair, construction of wharves, cargo handling and storage.³¹² This approach has brought dislocation. For example, it assisted the NSW Maritime Services Board to reduce its staff from 3,000 to 1,300 in the three years to 1991-92.³¹³

Market reform will also produce dislocation by encouraging efficiency drives. The introduction of competition will create job losses by sparking efficiency drives among former public monopolies seeking survival against competition. Privatisation will create further job losses through efficiency drives as private firms seek profit maximisation. There is much scope for increased efficiency and associated job losses in many sectors. For example, a 1994 BIE study noted that Australia's best performing electricity utility had labour productivity almost four times below world best practice.³¹⁴ In rail, a Travers Morgan study concluded that changes to work organisation and reductions in over-manning could bring labour cost savings of 34-38 per cent.³¹⁵ National Rail, established in 1993,³¹⁶ quickly established plans to cut operating costs by 45 per cent and at least triple labour and capital productivity by 1995-96.³¹⁷ In telecommunications, a 1992 BIE report found that the sector's labour productivity was only 34 per cent of world best practice, concluding that there was scope for a 40 per cent labour productivity increase.³¹⁸ Telstra have undergone a

³¹¹ Laura Tingle, 'Micro reform, macro misery: The jobs that are gone forever', *The Weekend Australian*, 15-16 June 1991, p.25,26 at p.25.

³¹² Industry Commission, *Port Authority Services and Activities*, op. cit., p.xvi,17-18.

³¹³ *ibid.*, p.26-28,145-146,150,181.

³¹⁴ Bureau of Industry Economics, *International Performance Indicators: Overview*, op. cit., p.29.

³¹⁵ *ibid.*, p.168,178.

³¹⁶ *Working Nation: Policies and Programs*, op. cit., p.25.

³¹⁷ Bureau of Industry Economics, *International Performance Indicators: Overview*, op. cit. p.41.

³¹⁸ *ibid.*, p.44.

major efficiency drive in response to the decision to allow open competition from July 1997. Considerable scope for efficiency improvements and job losses also exists in sectors such as port services, gas and water.

These factors, particularly policies to remove subsidies, have brought significant employment losses in some infrastructure sectors. As noted above, complete figures on the total employment losses are not available. The Steering Committee on National Performance Monitoring provide full-time equivalent figures for GTEs, but exclude some firms and do not provide a consistent sample over time. Meanwhile, the ABS provide figures for certain infrastructure sectors, but they do not provide separate figures for public and private providers. However, the use of various sources can produce a rough guide on the magnitude of employment dislocation.

In the rail sector, rail authorities state that employment fell from 110,000 in 1981 to 103,000 in 1986 and to 79,000 in 1990.³¹⁹ ABS figures, although they appear to exclude some employees included in rail authority estimates of total rail employment, indicate that, between November 1984 and November 1995, rail transport employment fell from 85,900 to 45,500.³²⁰ In telecommunications, employment in Telecom/Telstra fell from 97,000 in 1986³²¹ to around 68,000 in 1994-95 (in full-time equivalent employee terms)³²² and a further efficiency drive has ensued since then. In electricity and gas supply, employment fell from 97,800 to 55,200 between November 1984 and November 1995. In water supply, sewerage and drainage services, employment has fallen from 45,000 to 28,200 between November 1984 and November 1995.³²³ Employment in Australia Post, in full-time equivalent terms, fell to just over 37,000 in 1994-95, from the previous peak of just over 40,000 in 1990-91.³²⁴ Between June 1988 and March 1993, the number of workers employed by port authorities was reduced from 7,400 to 4,200 and waterfront employment fell from around 9,000 to 5,000.³²⁵ In aviation, Qantas, the Federal Airports Corporation (FAC), the Civil Aviation Authority, Ansett and Australian Airlines have undergone major staff cuts. The numbers employed in air transport fell 13,000 in the four years to November 1993.³²⁶ Loss making regional airports are also under threat as market policies are being implemented, while international airline deregulation would bring further major dislocation for Qantas. Shipping reform began in earnest in 1984³²⁷ and

³¹⁹ Industry Commission, *Rail Transport Volume 2: Appendices: Report No.13*, Australian Government Publishing Service, Canberra, 1991, p.81.

³²⁰ Australian Bureau of Statistics, *Labour Force Australia 1978-1995*, Cat. No.6204.0, p.343,348.

³²¹ Robert Albon, 'Privatising telecommunications: The next step', pp.73-77 in ch.7 'Privatisation', pp.62-77 in Chris Jones, Chris James & Andrew Norton (eds), *op. cit.*, p.76.

³²² Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1990-91 to 1994-95*, *op. cit.*, p.139.

³²³ Australian Bureau of Statistics, *Labour Force Australia 1978-1995*, *op. cit.*, p.343,348.

³²⁴ Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1987-88 to 1992-93*, *op. cit.*, p.401; and Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1990-91 to 1994-95*, *op. cit.*, p.132.

³²⁵ Industry Commission, *Port Authority Services and Activities*, *op. cit.*, p.147,219.

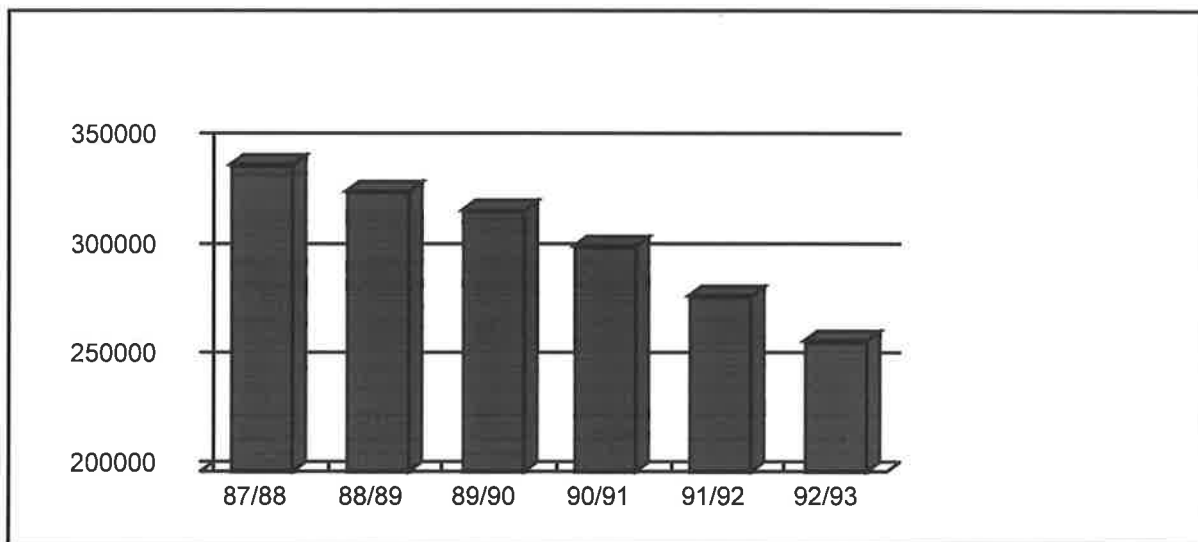
³²⁶ This last figure is from Australian Bureau of Statistics, *Labour Force Australia November 1989*, *op. cit.*, p.26 and Australian Bureau of Statistics, *Labour Force Australia November 1993*, *op. cit.*, p.37.

³²⁷ Industry Commission, *Annual Report 1991-92*, *op. cit.*, p.192,193.

brought significant efficiency gains.³²⁸ Water transport employment has fallen from 15,900 in November 1984 to 10,100 in November 1995.³²⁹

The figures in the table below from the Steering Committee on National Performance Monitoring of Government Trading Enterprises provide some indication of the total employment losses from GTEs in the period. Bearing in mind the limitations on the data mentioned, the figures show that GTE full-time equivalent employment has fallen by around 110,000, or around a third, between 1987-88 and 1994-95. This is an underestimate of the total jobs lost because the figures provided are full time equivalent positions. Further, the 1994 report only included around two-thirds of total GTE employment,³³⁰ while the 1996 report only covered around 75 per cent of total GTE employment.³³¹

GTE Employment (Full-Time Equivalents) 1987-88 to 1992-93



Source: Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1987-88 to 1992-93*, op. cit., p.5.

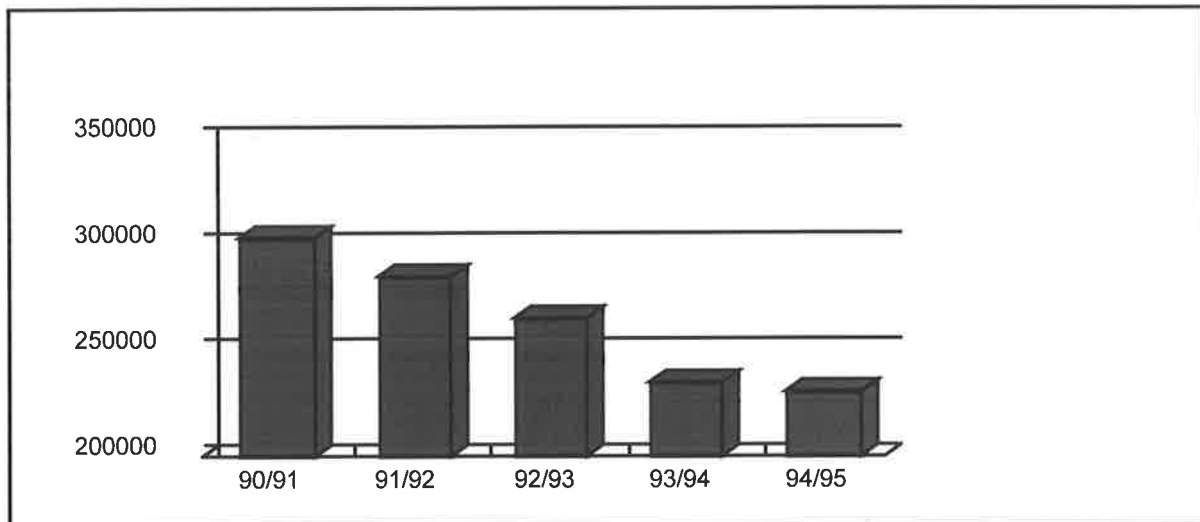
³²⁸ *Working Nation: Policies and Programs*, op. cit., p.24.

³²⁹ Australian Bureau of Statistics, *Labour Force Australia 1978-1995*, op. cit., p.343,348.

³³⁰ Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1987-88 to 1992-93*, op. cit., p.1.

³³¹ Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1990-91 to 1994-95*, op. cit., p.2.

GTE Employment (Full-Time Equivalents) 1990-91 to 1994-95



Source: Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1990-91 to 1994-95*, op. cit., p.10.

Given that reforms to introduce competition and privatisation are far from complete and that many sectors remain a long way from world best efficiency, significant further job losses are inevitable. For example, further restructuring will occur in electricity and gas, as firms thrive or decline in the national market, while open competition in telecommunications could produce substantial job losses in Telstra. Significant further reform also awaits the port services, rail and water sectors.

Sectors reliant on subsidised infrastructure provision have also faced dislocation as services are removed and/or prices are increased to bring a market return on investment. For example, sectors dependant on irrigation experience dislocation where market policies produce price increases and/or the termination of services. A 1993 IC report noted that irrigated areas are highly productive, representing only 5 per cent of the land under crop and pasture, but producing around 25 per cent of Australia's agricultural production. Nearly \$1 billion more is spent watering livestock pastures, much of which is used to feed dairy cattle.³³² Thus, removal of subsidies has the potential to cause significant dislocation in affected sectors.

Finally, in the regions, many of which have also been effected by tariff cuts, removal of general government services and the decline of agriculture, market infrastructure policies are reducing employment via increased prices and/or service closures in rail, air services, telecommunications, postal services, electricity, gas and water (especially irrigation). Regional areas are being particularly affected because public monopolies in many sectors have traditionally used profits from urban services, and sometimes taxation, to continue unprofitable infrastructure provision for many regional and rural areas.

Regional dislocation is occurring in two key ways. Firstly, some regional infrastructure providers are reducing or terminating operations. For example, the State Electricity Commission of Victoria reduced its employment from 36,000 to

³³² Industry Commission, *Water Resources and Water Waste Disposal*, op. cit., p.17,193,194.

21,000 between May 1988 and May 1993. This involved an employment decline of around 4,500 in the La Trobe Valley, which produces 90 per cent of Victoria's electricity output, and is highly dependent on such production.³³³ Secondly, price rises and the termination of infrastructure services creates dislocation in regional enterprises reliant on such services. As numerous regional submissions to the IC report on Regional Industry Adjustment,³³⁴ the EPAC 'Medium Term Review'³³⁵ and the Taskforce on Regional Development³³⁶ stressed, market reform will further disadvantage regional enterprises on their key weakness, namely their distance from the major markets that buy their products and provide inputs to their production.

For example, market pricing is producing regional dislocation because Commonwealth and State Governments had long subsidised rural water supplies in the name of regional development.³³⁷ As such, in all States, significant localised agricultural production has been dependent on heavily subsidised irrigation. Market pricing requires large price rises and termination of some irrigation services, which will impact significantly on affected sectors.³³⁸ The Murray-Darling Basin area, which accounts for most of Australia's irrigated production,³³⁹ will be particularly affected. It accounts for 30-40 per cent of Australia's primary resource-based production.³⁴⁰ As even the IC have admitted: '...many communities and industries owe their existence to abundant and cheap supplies of water for irrigation. In the Lower Darling Basin, in particular, whole communities rely upon water supplied in liberal quantities, with high reliability and a subsidised price.'³⁴¹ Numerous regions within the Basin will be affected, such as: Victoria's Goulburn Valley, in which half the agricultural land is under irrigation, including dairy produce and various fruit sectors;³⁴² South Australia's Lower Murray region, which is dependent on water to ensure the continuing viability of its local food production industry; the Riverland Sunraysia region, which includes Renmark, Berri, Wentworth and Mildura, where agricultural and horticultural production, especially citrus, dominates production and is heavily dependant on irrigation;³⁴³ and numerous areas in the New South Wales section of the Murray-Darling Basin, such as the Murrumbidgee Irrigation Area.³⁴⁴

Market reform in the heavily subsidised rail sector is also producing significant regional dislocation, as rail lines are terminated and dependent sectors such as tourism are adversely affected. The Rail Industry Council's 1990 report estimated

³³³ Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 2: Appendices*, op. cit., p.B5,C41,C42.

³³⁴ Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 1: Report*, op. cit., p.176,177.

³³⁵ Richard Filmer & Dan Dao, op. cit., p.4.

³³⁶ Taskforce on Regional Development, *Developing Australia: Volume 1*, op. cit., p.26.

³³⁷ Industry Commission, *Water Resources and Water Waste Disposal*, op. cit., p.194,195,198.

³³⁸ *ibid.*, p.201,305-342.

³³⁹ *ibid.*, p.23.

³⁴⁰ Taskforce on Regional Development, *Developing Australia: Volume 1*, op. cit., p.47.

³⁴¹ Industry Commission, *Water Resources and Water Waste Disposal*, op. cit., p.208.

³⁴² Taskforce on Regional Development, *Developing Australia: Volume 2*, op. cit., p.34,35.

³⁴³ *ibid.*, p.106-107,110-111.

³⁴⁴ Industry Commission, *Water Resources and Water Waste Disposal*, op. cit., p.201,302.

that moving to a 'commercial railway' scenario would result in a fall in the non-urban rail workforce from 70,000 to 25,349 in the 1986-87 to 2000-2001 period. All non-urban passenger services and all less-than-container-load services were expected to close under this commercial scenario.³⁴⁵

Regional dislocation will also occur elsewhere. For example, regional dislocation among gas employees and sectors reliant on gas will ensue because governments have traditionally subsidised regional gas infrastructure as a means of promoting regional development.³⁴⁶ The future of some of Australia's 74 regional ports is also uncertain because, as the IC's 1993 report on ports noted, most ports were still achieving negative returns, despite considerable improvement.³⁴⁷ Loss of such ports or price rises would result in employment losses for port employees and for employees in regional businesses reliant upon such port services. The decision to privatise all 23 FAC airports³⁴⁸ will also bring regional dislocation because the system had relied on using the major profits made by Melbourne, Brisbane and Sydney, and the mild profits made by Adelaide and Perth, to cross-subsidise the other 18 airports, all of which run at a loss. Privatisation may therefore lead to dislocation, as some regional airports close, and regional firms reliant on such airports, such as those in the tourism sector, contract or terminate.³⁴⁹ In postal services, the IC have recommended that the Federal Government should establish competition to Australia Post, and establish a review on its possible privatisation, once competitive networks have been established.³⁵⁰ This would produce regional dislocation, as there is little chance a private firm would continue to cross-subsidise the numerous loss-making regional post offices.³⁵¹

A 'domino effect' of collapsing services and economic decline can be triggered by the removal of government services and infrastructure. This occurs through negative multiplier effects, as well as by firms and individuals leaving regional areas as services are withdrawn. In turn, the decline can cause bankruptcies, as financial institutions call in loans backed by assets, the value of which has declined. Lower asset prices can also impede business growth by reducing the capacity of businesses to access finance.³⁵² Queensland University demographer Dr Martin Bell believes the key reason for the withdrawal of population from the regional and rural areas is the

³⁴⁵ Rail Industry Council, *op. cit.*, p.31,33-37,40.

³⁴⁶ Australian Gas Light Company, *Submission to the Industry Commission Inquiry 'Impediments to Regional Industry Adjustment'*, Unpublished, 1993, p.3.

³⁴⁷ Industry Commission, *Port Authority Services and Activities*, *op. cit.*, p.7,24.

³⁴⁸ *Working Nation: Policies and Programs*, *op. cit.*, p.39.

³⁴⁹ Chris Falvey, 'All FAC airports to be sold', *The Australian*, 5 May 1995, p.17.

³⁵⁰ Industry Commission, *Annual Report 1991-92*, *op. cit.*, p.39,116.

³⁵¹ Australian Postal Corporation, *1985 Tenth Annual Report*, Government Printer, Canberra, 1985, p.14.

³⁵² Maryborough & District Development Committee, *Submission of Maryborough & District Development Committee to Industry Commission Inquiry: Impediments to Regional Industry Adjustment*, Unpublished, 1993, p.6.

rationalist policy of removing Commonwealth and State Government services,³⁵³ which the IC also admits has had an effect.³⁵⁴

As with tariff cuts, rationalists have been relatively indifferent to this regional pain. For example, several submissions to the IC Regional Adjustment Report stated that deregulation of intrastate aviation might lead to the removal of their local air service and thereby impede the development and adjustment of their regions.³⁵⁵ In response, the IC stated: '[T]he regional implications of intrastate aviation deregulation do not constitute an argument against further removal of government intervention.'³⁵⁶ Reports by the IC, the BIE and EPAC all note that major regional dislocation will occur as a result of market infrastructure reform, but none provide any detailed analysis of these major costs, let alone a comparison of such costs compared to the benefits of market reform. Indeed, each report simply notes the regional implications and then advocates rapid implementation of market reform.³⁵⁷

The key employment concern of the market reform program is that, because it involves major shifts of investment and employment between firms, industries and regions,³⁵⁸ it is prone to leaving localised pools of long-term structurally unemployed people in various regions and sectors. For example, many of the 4,500 workers who lost their electricity sector jobs in the La Trobe Valley (noted above) may have had difficulty finding alternative employment because their jobs are probably gone forever. Unless these workers can retrain to create skills suitable in other sectors, they may face long-term unemployment. Market infrastructure reform will create localised pools of long-term, structurally unemployed people via: the impact of the 110,000 plus job losses in infrastructure sectors; the concentration of such losses in particular regions, which are often experiencing slow or negative employment growth; and the impact of the removal of such infrastructure on reliant sectors.

Studies have confirmed that infrastructure job cuts are particularly likely to create structural, long-term unemployment. For example, a Bureau of Transport and Communications Economics study of the rail sector conducted between January 1987

³⁵³ Julian Cribb, 'Farewell to the heartland', *The Australian Magazine*, 12-13 February 1994, pp.10-16, at p.13.

³⁵⁴ Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 1: Report*, op. cit., p.23.

³⁵⁵ *ibid.*, p.153,154.

³⁵⁶ *ibid.*, p.154.

³⁵⁷ Bureau of Industry Economics, *International Performance Indicators: Overview*, op. cit., p.78 noted '...potentially significant adjustment costs...', but before any serious analysis, and indeed in the same sentence, added that too slow a process of reform would lead to major costs to the community in terms of international competitiveness foregone. Richard Filmer & Dan Dao, op. cit., p.1 noted that '...adjustments in employment and conditions in some areas of reform can be severe...', but again no serious analysis of such adjustment was attempted and the report's results indicated that no serious adjustment problems were to occur. Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 1: Report*, op. cit., p.176-179 acknowledged that regional submissions believed that the market reform program would cause disproportionate pain for the regions, but responded that they weren't certain rural areas received more subsidies than city areas. The IC concluded that market pricing should be applied to both regional and capital city areas, and all cross subsidies to regional areas should be removed, without any serious analysis of the regional and sectoral costs of their program being attempted.

³⁵⁸ This point is noted by Paul Kelly, *The End of Certainty*, op. cit., p.390 and R.G. Gregory, ch.15 'An Overview of Microeconomic Reform', op. cit., pp.305-314 at p.311.

and June 1988 found that, of those workers accepting a redundancy package, 44 per cent remained unemployed and two-thirds of these for at least 13 months.³⁵⁹

In some instances, dislocation is being suffered by those least able to find alternative employment. For example, in the port sector, those being displaced are primarily unskilled or semi-skilled workers, as the composition of jobs in the sector shifts increasingly towards higher skilled employees.³⁶⁰ Similarly, in the rail sector, the 1990 Rail Industry Council report found that low skilled employees were experiencing the majority of the employment dislocation, as the rapidity of the rationalisation process has made many rail workers skills redundant. The 1990 Rail Industry Council report found only 15 per cent of the rail workforce had undergone training and acquired skills that are transferable to other industries. There is also a large proportion of workers from non-English speaking backgrounds in the rail workforce, reaching as high as 40 per cent in some rail systems. Further, many of those displaced are in weak regional labour markets, such as Whyalla and Griffith. The majority of these rail workers will not find alternative employment within a year.³⁶¹

Thus, in summary, free market infrastructure reform produces significant, long-term, structural unemployment as: market pricing and competitive neutrality policies necessitate price rises or service closures in subsidised or otherwise favoured sectors; competition causes some public providers to lose market share; privatisation and contracting out create downsizing in the GBEs they replace; and competition and privatisation spark efficiency drives. Further dislocation is caused: among sectors that were reliant on subsidised infrastructure provision; and among regions, where regional services are forced to terminate and where regional firms reliant on subsidised infrastructure services contract as the services are terminated or prices are raised to produce a market return.

Managing Competition and Privatisation

Rationalists may also lack the strategic industry policy framework needed to implement competition and privatisation in the most effective way. With respect to introducing competition in former public monopoly areas, rationalists can produce sub-optimal outcomes due to their excessive faith in market forces and excessive disregard for the capacity of government. For example, rationalists often seek speedy implementation of open competition in formerly protected markets, without adequate consideration of the impact on existing investment and employment in the sector, nor for the structure of firms that would result in the sector. By contrast, a more sensible approach would be to make domestic operators efficient, build up domestic rivalry and only then apply open competition. This approach assists in maintaining Australian infrastructure service providers and existing investment and jobs, while encouraging a competitive market structure over the longer term.

³⁵⁹ Industry Commission, *Rail Transport Volume 1 Report*, op. cit., p.182.

³⁶⁰ This shift in industry skill requirements is noted in Industry Commission, *Port Authority Services and Activities*, op. cit., p.148.

³⁶¹ Rail Industry Council, op. cit., p.41,59.

This was illustrated in the telecommunications policy debates. While Treasury and some members of the Labor Government wanted a speedy transition to open competition, the 'Beazley option' of first moving to duopoly and then open competition in 1997 prevailed. The latter option allowed Telstra to improve its efficiency and competitiveness in preparation for such competition. As a result, a market structure involving strong domestic competitors, as well as international competition, has been made possible. An immediate move to open competition may have left an inefficient Telstra open to obliteration, led to the loss of much existing employment and production, and paved the way for a market dominated solely by foreign competitors.

Introducing competition into markets traditionally supplied by public monopolies also requires a strategic approach. Simply removing regulatory restrictions on competition and privatising monopolies may bring adverse results, as private firms with monopoly power can charge above market prices and deliver essential services inefficiently without the discipline of competition. Structural reforms are needed to dismantle excessive market power and make the market contestable. Natural monopoly elements, such as rail tracks, need to be separated from potentially competitive activities, such as rail services, with the latter being structurally separated into several competing independent firms. Strategic judgements must be made about which parts should be privatised, whether Australian ownership is important, and which parts are 'natural monopolies' and should remain public, or alternatively, made private, with price cap legislation.³⁶² Ensuring markets remain competitive after structural separation is also important. The government must use the powers of the Trade Practices Act to: ensure competitors do not collude to fix prices or engage in other anti-competitive activity;³⁶³ and prevent the re-merging of the broken up enterprises, where the merger would be likely to result in a substantial lessening of competition.³⁶⁴ In summary, introducing competition requires a strategic approach, not the simple market policies of deregulation and privatisation.

Rationalists may also be too inclined to advocate privatisation because of their blind faith in market forces and their under-estimation of the utility of government action. For example, Strong writes:

Inevitably, ... government enterprise can never be as efficient or service-oriented as private enterprises... [T]he behaviour changes engendered by private ownership as opposed to ownership by politicians, will inevitably lead to more competition, better customer service and better resource allocation of labour and capital within the economy...³⁶⁵

As with competition, privatisation requires a strategic industry policy framework because it involves the central question rationalists fail to address, namely the appropriate mix between public and private sector provision in the economy. Each decision requires considerable research and strategic thought about the best mix

³⁶² Frederick G. Hilmer, Mark Rayner & Geoffery Taperell, *op. cit.*, p.215,217,219.

³⁶³ *ibid.*, p.87,130.

³⁶⁴ Allan Fels & Jill Walker, 'Competition policy and economic rationalism' in Stephen King & Peter Lloyd (eds), *op. cit.*, pp.169-191 at p.179,189.

³⁶⁵ Chris Strong, *op. cit.*, p.64,65.

between government and private sector involvement, not an automatic assumption that market forces should prevail.

The privatisation of Telstra is a good example. Kept public, it would provide more than \$2 billion to government annually, is 100 per cent Australian owned, is achieving considerable export growth, has undergone major efficiency improvements, provides crucial technology to virtually all firms, and could be used to keep foreign firms 'honest' in the environment of open competition. Privatisation would mean significant loss of Australian ownership, loss of government revenue and possibly reduced exports if a foreign multinational gained a controlling share and was already exporting to the region from other nations. Alternatively, it may well be that, in an environment of open competition, a privatised Telstra would become substantially more efficient, create even more exports and offer cheaper prices and better service. The decision on Telstra is not clear-cut, and needs to be approached with an open mind and a strategic policy framework, not an ideological, pre-determined view that privatisation is always optimal for the economy.

Each privatisation requires a range of strategic choices. As Michael Porter's study found: '...[D]eregulation and privatization will not succeed without active *domestic rivalry*.'³⁶⁶ Thus, where firms operate in a competitive national market, the former public monopoly can simply be privatised. If however, privatisation would give the firm too much market power, it is vital that the monopoly is broken up into several competing businesses before privatisation. Governments have a strong incentive to sell public monopolies without structural separation to maximise the sale price. In some instances where there has been insufficient competition, privatisations have given excessive market power to private firms, allowing them to charge monopoly prices and provide sub-standard service. Structural reforms must take place before privatisation to avoid such negative economic outcomes.³⁶⁷

Strategic choices also need to be made about whether each firm should be privatised after the structural separation of a public monopoly. It may be useful to keep one competitor in each sector in public ownership in order to keep the focus on long run strategic infrastructure development. Private investors may under-invest in search of short-term profitability, rather than focusing on nation building. This may be why transport, communications and energy are largely in public hands in OECD nations.³⁶⁸

Rationalists may also be too willing to privatise natural monopolies. For example, Australia's airports are being privatised. As almost all the airports are natural monopolies, private firms will have considerable market power to charge high prices, once the five year price cap legislation expires. Further, because only seven of the 23 airports make a profit, the 18 loss-making airports will have to charge higher prices or cease operations, with negative implications for regions and sectors reliant on such provision. Thus, privatisation of airports without ongoing price cap legislation and in the absence of competition, may worsen national economic

³⁶⁶ Michael Porter, op. cit., p.664.

³⁶⁷ Frederick G. Hilmer, Mark Rayner & Geoffery Taperell, op. cit., p.226-228,234.

³⁶⁸ Simon Domberger, op. cit., p.166.

performance. These are the reasons why the FAC argued that the airports needed to be run as a national network.³⁶⁹ Similarly, many port authority activities are natural monopoly or duopoly activities. In these areas, market forces will not generate price competition,³⁷⁰ yet the IC recommend widespread privatisation³⁷¹ and it is proceeding in many areas.

Conclusion

Rationalist infrastructure reform appears to have improved the functioning of infrastructure sectors. Most particularly, introducing competition in sectors formerly dominated by poorly performing government monopolies, such as in electricity, gas and telecommunications, has brought significant efficiency improvements and cost reductions. Corporatisation policies such as market pricing have led to a significant reduction in GTE debt. Such policies are an important priority given that, at 1987-88, real GTE debt stood at \$44 billion.³⁷² If managed effectively, there is also scope for gains through privatisation, where it occurs in the context of highly competitive markets. In these circumstances, the profit motive engendered by private ownership could be expected to make some contribution to improved economic performance from infrastructure providers. Overall, rationalist reforms have produced lower average prices, sharply rising productivity and lower GTE debt.

These infrastructure performance improvements are likely to have produced economy-wide gains. Given that infrastructure costs are an important part of the input costs in many industries, the significant cost reductions achieved will have improved the cost competitiveness of firms throughout the economy. To the extent that cost reductions increase competitiveness and sales, such cost reductions have aided growth, exports and restructuring.

The key limitations of rationalist infrastructure reform are that: it may make only a small contribution to net employment growth; and it does little to foster an innovation-driven economy, which is the key to national competitive advantage.

Rationalist infrastructure policy also has several key weaknesses. In particular, rationalists are focused on establishing a market allocation of resources, when the key policy requirement is to overcome the massive failure by the market to produce the infrastructure necessary to maximise economic performance. A policy prescription to establish a market allocation of resources is of minimal utility when the activity is primarily undertaken by government. The prescription that governments seek a market rate of return on their infrastructure investment fails to answer the central infrastructure policy question, namely: What mix and level of government spending in infrastructure can maximise national economic growth and competitiveness? The level, type and quality of public investment in infrastructure,

³⁶⁹ Chris Falvey, 'All FAC airports to be sold', *The Australian*, 5 May 1995, p.17.

³⁷⁰ Howard Dick, ch.10 'Progress and frustration: Restructuring of coastal shipping and ports' in Peter Forsyth (ed.), *op. cit.*, pp.204-221 at p.211,217.

³⁷¹ Industry Commission, *Port Authority Services and Activities*, *op. cit.*, p.182,184.

³⁷² Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1987-88 to 1992-93*, *op. cit.*, p.3.

by determining the quality, availability and cost competitiveness of infrastructure services to industry, is an important cause of the level of growth and competitiveness of the Australian economy. These policy issues must be primarily determined by government.

Rationalist ideology may have contributed to the rapid fall in government investment in the period because rationalists: are focused on market policies, not addressing market failure; have little faith in the utility of government action; recommend that public infrastructure investment only occur where it is very likely to make a market return; are against national planning of infrastructure investments; and place greater priority on cutting government spending than on ensuring that sufficient public investment is undertaken. Public infrastructure investment has plummeted during the rationalist era, raising the possibility that it has been insufficient to maximise the growth of the national economy.

There is strong evidence that increasing investment in infrastructure could foster growth, restructuring and national competitiveness. The history of industrial nations shows that there is significant market failure in the provision of infrastructure. Significant government investment is needed to provide adequate infrastructure to support the private sector and the economy as a whole. A large number of economically beneficial infrastructure projects were yet to be completed when Labor lost power. This provides a major opportunity for Australia to increase its public infrastructure investment and thereby provide employment, assist growth and restructuring, and improve national competitiveness. Government infrastructure policy can also assist restructuring by ensuring that infrastructure investments encourage exports, and exports of ETMs and sophisticated services in particular.

Another key weakness of rationalist infrastructure reform is that it appears to have produced very significant structural unemployment via: implementation of market pricing and investment in a situation where every infrastructure sector, bar perhaps (non-heavy vehicle) road transport do not cover their costs; corporatisation, which will exacerbate the pressures for price increases via the removal of various advantages enjoyed by public enterprises, including the requirement to pay all taxes and charges; and privatisation and competition policies, which produce employment losses by sparking efficiency drives. Major employment losses will also occur in sectors and regions that have relied on subsidised infrastructure provision, as infrastructure services are removed and/or prices increased to bring a market return on investment.

In short, rationalist infrastructure reform has been worthwhile for the benefits it has produced. However, the rationalist approach also has weaknesses, particularly the fact that it has involved too little public infrastructure investment to maximise growth and restructuring. Australia will have to look beyond rationalist infrastructure reform to achieve a significant improvement in national competitive advantage, restructuring and employment growth.

Chapter Three: Small Government Policy

Introduction

This thesis critiques the rationalist assumption that if resources are allocated by the market, they are allocated with optimum efficiency, leading to rapid restructuring and employment growth, and surging national competitiveness. This chapter tests these views, as applied in the form of the small government policies pursued by the Labor Government.

Labor's Small Government Policies

Rationalists believe in reducing government expenditure to an absolute minimum in order to maximise the role of markets in allocating resources, and to reduce tax on companies so as to encourage investment. This belief underpinned the unprecedented reduction in Commonwealth outlays under the Labor Government, which fell from 30.2 per cent of GDP to 24.1 per cent of GDP between 1984-85 and 1989-90. As shown below, Commonwealth and total government outlays also declined in a structural sense over the 1983-84 to 1995-96 period, notwithstanding the brief cyclical rise during the recession and its aftermath. These cuts helped to facilitate a reduction in company tax from 60 to 33 per cent, before it was increased to 35 per cent.

The Size of Government as a Percentage of GDP

Year	Commonwealth Outlays	Total Government Outlays	Commonwealth Revenue	Total Government Revenue
1983-84	29.5	37.9	25.3	31.5
1984-85	30.2	39.0	26.9	33.3
1985-86	29.8	39.2	27.1	34.1
1986-87	29.2	39.3	27.9	35.2
1987-88	26.8	36.8	27.4	35.1
1988-89	24.7	35.0	26.2	34.7
1989-90	24.1	35.4	26.0	34.9
1990-91	25.5	34.6	24.7	34.1
1991-92	26.7	37.2	22.8	32.7
1992-93	27.1	36.7	22.1	32.1
1993-94	26.7	35.6	21.9	32.5
1994-95	26.8	35.6	23.2	33.1
1995-96	26.1	33.9	23.9	34.2

Source: The figures for the period 1983-84 to 1989-90 are from Australian Bureau of Statistics, *Australian Economic Indicators March 1993*, Cat. no.1350.0, p.33. The figures for 1990-1991 to 1995-96 are from Australian Bureau of Statistics, *Australian Economic Indicators January 1998*, Cat. no.1350.0, p.10.

The table above also shows that while there was also a decline in Commonwealth revenue over the period, there was no major structural change in total government revenue. However, the period is a good one in which to test small government policies, because, as shown on the table below, Australia had the third smallest total government sector in the OECD. Between 1983 and 1995, the average size of

government in Australia was 36 per cent of GDP, compared with 48 per cent of GDP among small OECD nations.³⁷³

The Size Of Government in OECD Nations

Nation	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	Ave 83-95
Japan	33.3	32.3	31.6	31.9	32.1	31.3	30.6	31.3	30.9	31.7	33.7	34.3	35.6	32.4
USA	33.4	32.4	32.9	33.1	33.0	32.1	31.9	32.8	33.4	34.4	33.9	33.0	33.3	33.0
Australia	35.1	35.4	36.5	37.5	35.4	33.8	33.1	35.0	37.3	37.8	37.5	37.0	37.1	36.0
Iceland	36.1	33.1	35.7	37.8	34.7	39.5	42.0	39.4	40.2	40.6	40.4	40.1	39.0	38.4
OECD ave	39.8	39.2	39.4	39.3	39.0	38.2	37.8	38.8	39.7	40.8	41.6	40.8	40.8	39.6
Spain	37.7	38.1	41.2	40.7	39.6	39.5	40.9	42.0	43.4	44.5	47.6	46.1	44.3	42.0
UK	44.7	45.1	44.0	42.4	40.7	37.9	37.6	39.9	40.7	43.2	43.6	43.2	43.4	42.0
Portugal	45.6	42.1	41.2	41.6	40.2	39.4	38.4	41.8	43.9	43.3	44.7	42.7	43.1	42.2
Greece	37.5	39.9	42.9	42.4	42.3	42.2	43.6	48.3	44.3	45.9	48.5	48.0	46.0	44.0
Canada	45.3	45.0	45.3	44.6	43.5	42.5	43.1	46.0	49.2	50.2	49.4	47.1	46.2	46.0
Ireland	53.0	51.3	52.3	52.5	50.6	47.3	40.6	41.2	42.2	42.9	42.8	43.7	42.0	46.3
Norway	43.4	41.5	40.9	44.6	46.0	49.6	49.2	49.8	50.7	52.0	51.3	49.6	47.4	47.4
Germany	47.8	47.4	47.0	46.4	46.7	46.3	44.8	45.1	47.9	48.5	49.6	49.0	49.5	47.4
Small nations ave	47.4	46.9	47.9	47.8	47.0	46.3	45.7	46.9	48.3	49.6	51.2	49.9	48.7	48.0
Total EU nations	48.7	48.7	49.0	48.3	47.8	46.9	46.4	47.5	48.8	50.0	51.9	50.7	50.0	48.8
Finland	42.4	42.0	43.8	44.7	45.0	44.0	42.0	45.3	53.9	59.1	60.2	59.4	57.6	49.2
Austria	50.4	50.0	50.9	51.6	51.9	50.2	49.0	48.6	49.8	50.4	53.1	51.8	52.8	50.8
France	51.4	51.9	52.1	51.3	50.9	50.0	49.1	49.8	50.5	52.2	54.8	54.2	53.7	51.7
Italy	48.7	49.3	50.9	50.7	50.2	50.3	51.3	53.2	53.5	53.6	56.9	54.1	51.9	51.9
Netherlands	59.9	58.8	57.1	57.0	58.5	56.7	53.9	54.1	54.6	55.1	55.3	53.1	50.9	55.8
Belgium	63.6	62.3	61.9	61.3	59.5	57.0	54.9	55.0	56.2	56.3	56.8	56.1	54.9	58.1
Denmark	61.6	60.4	59.3	55.7	57.3	59.4	59.6	58.6	59.2	61.1	63.7	63.6	62.4	60.1
Sweden	64.5	62.0	63.3	61.6	57.8	58.1	58.3	59.1	61.3	67.2	71.0	68.7	66.2	63.0

Source: Organisation for Economic Co-operation and Development, *OECD Economic Outlook June 1996*, Organisation for Economic Co-operation and Development, Paris, 1996, p.A31. Notes: This table measures total government current outlays plus net capital outlays as a percentage of nominal GDP. OECD average only includes those nations in this table.

Small Government Policies and Economic Outcomes

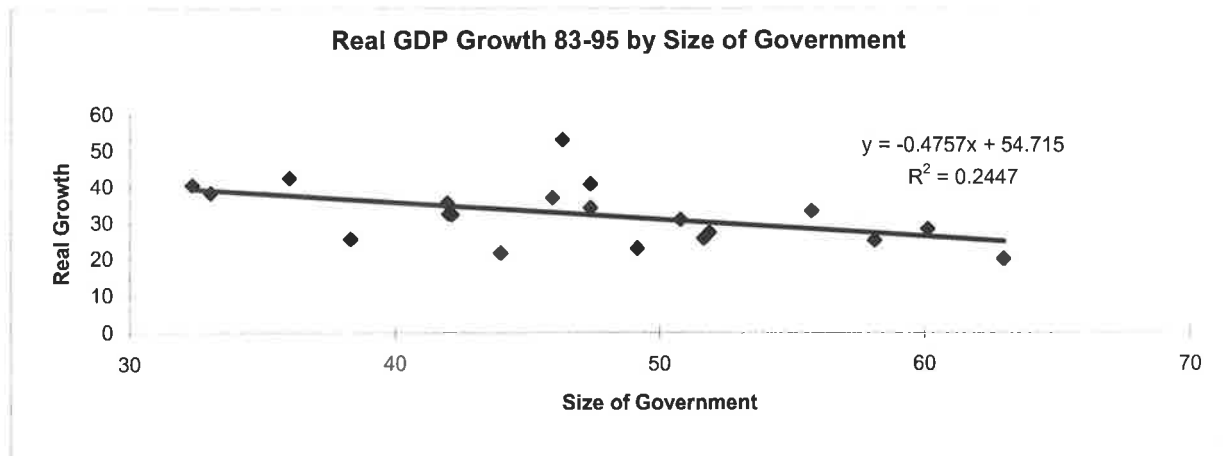
The following tables seek to determine whether, in the 1983 to 1995 period, there was a correlation between the size of government and, in turn: real GDP growth; real employment growth; unemployment rates; and percentage of the working age population employed. In each section, there is a table providing the raw figures for the period, as well as two graphs, the first illustrating a straight regression, and the second showing the moving average.

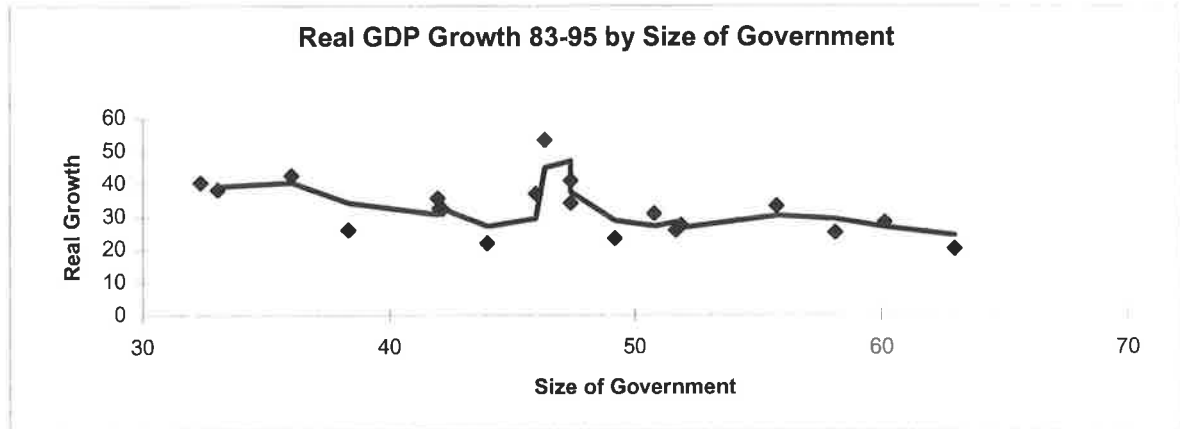
³⁷³ Organisation for Economic Co-operation and Development, *OECD Economic Outlook June 1996*, Organisation for Economic Co-operation and Development, Paris, 1996, p.A31.

Growth in Real GDP by Size of Government 1983 to 1995

Nation	G:GDP 83-95	Year														Real GDP Growth 83-95	Ave 83-95
		1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995			
Japan	32.4	2.3	3.9	4.4	2.9	4.2	6.2	4.8	5.1	4.0	1.1	0.1	0.5	0.9	40.40	3.1	
USA	33.0	4.0	6.8	3.7	3.0	2.9	3.8	3.4	1.3	-1.0	2.7	2.2	3.5	2.0	38.30	2.9	
Australia	36.0	1.0	7.5	4.4	1.8	4.7	4.3	4.2	1.4	-1.6	2.6	4.0	5.2	3.1	42.60	3.3	
Iceland	38.4	-2.1	4.1	3.3	6.2	8.6	-0.1	0.3	1.1	1.3	-3.3	0.8	3.5	2.0	25.70	2.0	
Spain	42.0	2.2	1.5	2.6	3.2	5.6	5.2	4.7	3.7	2.3	0.7	-1.2	2.1	3.0	35.60	2.7	
UK	42.0	3.7	2.3	3.8	4.3	4.8	5.0	2.2	0.4	-2.0	-0.5	2.3	3.8	2.4	32.50	2.5	
Portugal	42.2	-0.2	-1.9	2.8	5.0	5.5	5.8	5.7	4.3	2.1	1.1	-1.2	0.8	2.5	32.30	2.5	
Greece	44.0	0.4	2.8	3.1	1.6	-0.5	4.5	3.8	0.0	3.1	0.4	-1.0	1.5	2.0	21.70	1.7	
Canada	46.0	3.2	6.3	4.8	3.3	4.2	5.0	2.4	-0.2	-1.8	0.8	2.2	4.6	2.2	37.00	2.8	
Ireland	46.3	-0.2	4.4	3.1	-0.4	4.7	4.3	6.1	7.8	2.2	3.9	3.1	6.4	7.7	53.10	4.1	
Norway	47.4	4.6	5.7	5.3	4.2	2.0	-0.5	0.3	1.6	2.9	3.4	2.1	5.7	3.7	41.00	3.2	
Germany	47.4	1.8	2.8	2.0	2.3	1.5	3.7	3.6	5.7	5.0	2.2	-1.2	2.9	1.9	34.20	2.6	
Finland	49.2	3.0	3.1	3.3	2.4	4.1	4.9	5.7	0.0	-7.1	-3.6	-1.2	4.4	4.2	23.20	1.8	
Austria	50.8	2.0	1.4	2.5	1.2	1.7	4.1	3.8	4.2	2.8	2.0	0.4	3.0	1.8	30.90	2.4	
France	51.7	0.7	1.3	1.9	2.5	2.3	4.5	4.3	2.5	0.8	1.2	-1.3	2.8	2.2	25.70	2.0	
Italy	51.9	1.0	2.7	2.6	2.9	3.1	4.1	2.9	2.1	1.2	0.7	-1.2	2.2	3.0	27.30	2.1	
N'lands	55.8	1.7	3.3	3.1	2.8	1.4	2.6	4.7	4.1	2.3	2.0	0.2	2.7	2.4	33.30	2.6	
Belgium	58.1	0.5	2.2	0.8	1.4	2.0	4.9	3.4	3.4	2.2	1.8	-1.6	2.2	1.9	25.10	1.9	
Denmark	60.1	2.5	4.4	4.3	3.6	0.3	1.2	0.6	1.4	1.3	0.2	1.5	4.4	2.6	28.30	2.2	
Sweden	63.0	1.8	4.0	1.9	2.3	3.1	2.3	2.4	1.4	-1.1	-1.4	-2.2	2.6	3.0	20.10	1.5	

Source: Organisation for Economic Co-operation and Development, *OECD Economic Outlook June 1996*, op. cit., p.A4,A31.



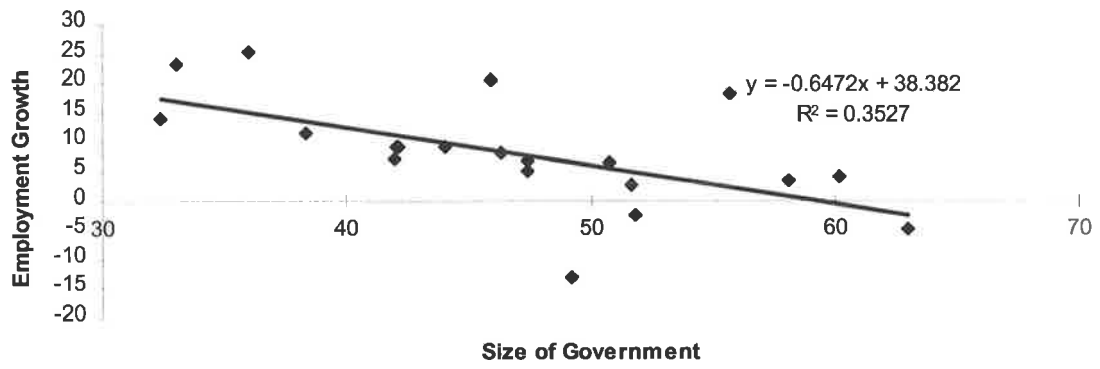


Employment Growth by Size of Government 1983 to 1995

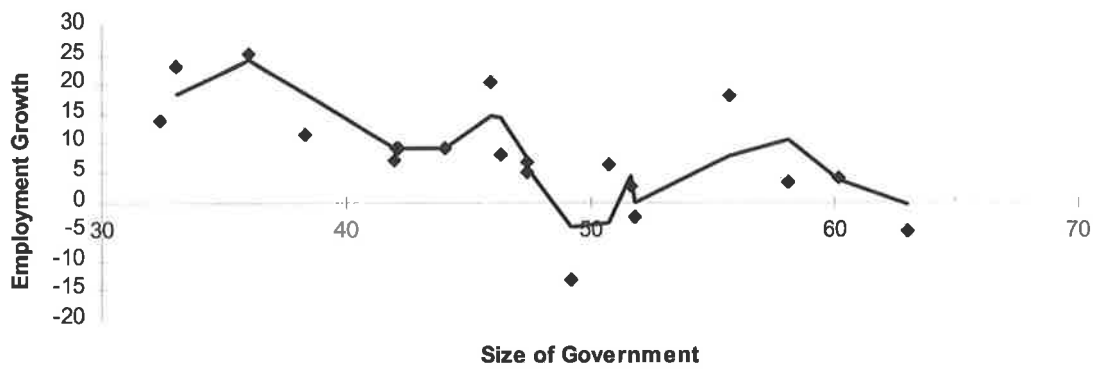
Nation	G:GDP 83-95	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	Emp growth 83-95	Ave 83-95
Japan	32.4	1.7	0.6	0.7	0.8	1.0	1.7	2.0	2.0	1.9	1.1	0.2	0.1	0.1	13.9	1.1
USA	33.0	1.3	4.1	2.0	2.3	2.6	2.3	2.0	1.3	-0.9	0.7	1.5	2.3	1.6	23.1	1.8
Australia	36.0	-1.8	2.9	3.6	3.5	2.2	3.8	4.7	1.5	-2.1	-0.7	0.3	3.1	4.1	25.1	1.9
Iceland	38.4	0.9	1.5	3.6	3.1	5.8	-2.8	-1.5	-0.9	-0.4	0.5	-0.3	1.0	1.0	11.5	0.9
Spain	42.0	-1.1	-1.8	-0.9	2.2	3.1	2.9	4.1	2.6	0.2	-1.9	-4.3	-0.9	2.7	6.9	0.5
UK	42.0	-0.2	2.3	1.0	0.3	2.4	3.5	2.7	0.4	-3.1	-2.4	0.8	0.7	0.6	9.0	0.7
Portugal	42.2	4.0	-0.1	-0.5	0.1	2.6	2.6	2.2	2.2	2.9	-6.4	-2.0	-0.1	1.5	9.0	0.7
Greece	44.0	1.1	0.4	1.0	0.4	-0.1	1.6	0.4	1.3	-2.3	1.5	0.9	1.9	0.9	9.0	0.7
Canada	46.0	0.6	2.7	3.0	3.0	2.7	3.2	2.1	0.6	-1.9	-0.6	1.4	2.1	1.6	20.5	1.6
Ireland	46.3	-2.1	-1.9	-2.0	0.2	1.0	-0.1	1.2	3.3	-0.2	0.4	1.8	3.5	3.0	8.1	0.6
Norway	47.4	0.1	1.3	2.3	3.5	1.9	-0.6	-3.0	-0.9	-1.0	-0.3	0.0	1.5	2.0	6.8	0.5
Germany	47.4	-1.4	0.2	0.7	1.4	0.7	0.8	1.5	3.0	2.5	-1.8	-1.8	-0.7	-0.2	4.9	0.4
Finland	49.2	0.6	1.0	1.0	-0.3	-0.3	0.3	1.6	-0.1	-5.2	-7.1	-6.1	-0.8	2.2	-13.2	-1.0
Austria	50.8	-1.2	-0.1	0.2	0.4	0.0	0.6	1.5	1.9	1.9	1.5	-0.3	0.2	-0.4	6.2	0.5
France	51.7	-0.2	-0.9	-0.1	0.5	0.4	1.0	1.4	1.0	0.0	-0.6	-1.4	0.3	1.1	2.5	0.2
Italy	51.9	0.1	0.3	0.3	0.4	-0.3	0.5	-0.1	1.2	0.7	-0.9	-2.5	-1.7	-0.6	-2.6	-0.2
Netherlands	55.8	-1.3	0.5	1.3	2.5	1.6	2.3	1.8	3.0	2.6	1.6	0.7	-0.1	1.5	18.0	1.4
Belgium	58.1	-1.0	-0.2	0.6	0.6	0.4	1.5	1.6	1.4	0.1	-0.4	-1.1	-0.7	0.4	3.2	0.2
Denmark	60.1	0.3	1.7	2.5	2.6	0.9	-0.6	-0.6	-1.0	-1.5	-0.6	-1.0	-0.6	1.8	3.9	0.3
Sweden	63.0	0.1	0.8	-0.3	0.8	1.0	1.4	1.5	1.0	-1.9	-4.3	-5.8	-0.9	1.6	-5.0	-0.4

Source: Organisation for Economic Co-operation and Development, *OECD Economic Outlook June 1996*, op. cit., p.A.23,A31.

Employment Growth 83-95 by Size of Government



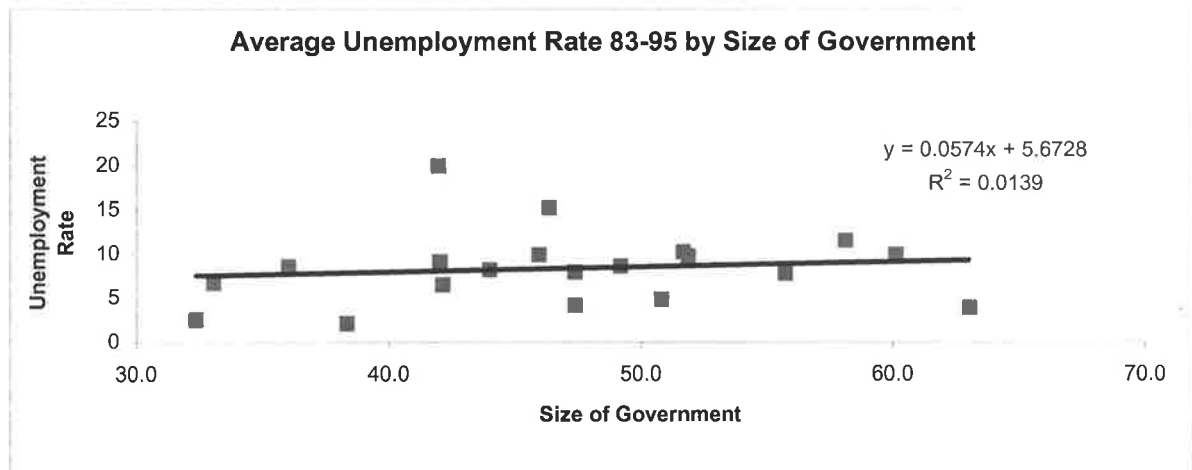
Employment Growth 83-95 by Size of Government

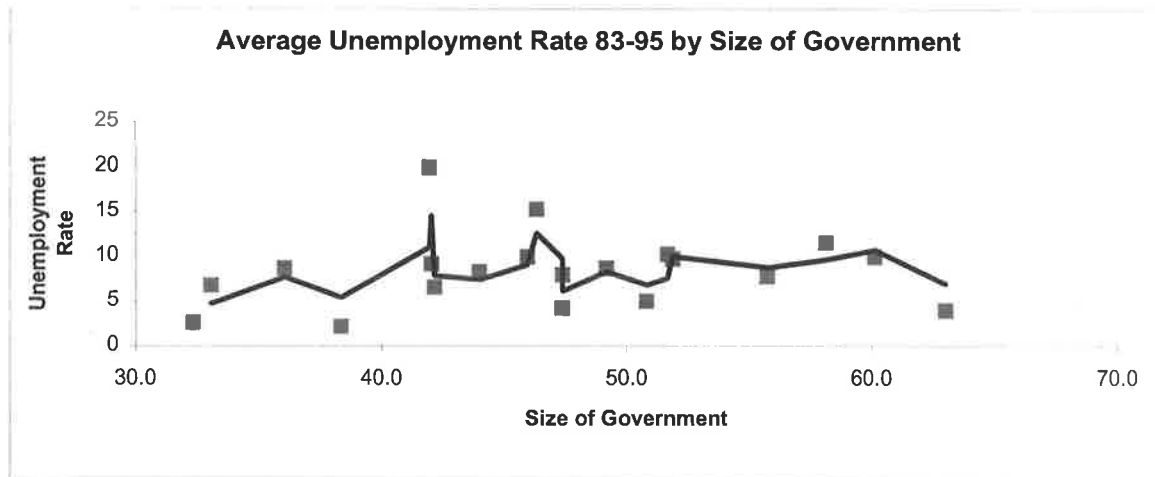


OECD Unemployment Rates (Commonly-Used Definitions) by Size of Government

Nation	G:GDP 83-95														Ave Unemploy- ment Rate 83-95
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995		
Japan	32.4	2.7	2.7	2.6	2.8	2.9	2.5	2.3	2.1	2.1	2.2	2.5	2.9	3.1	2.6
United States	33.0	9.6	7.5	7.2	7.0	6.2	5.5	5.3	5.6	6.8	7.5	6.9	6.1	5.6	6.7
Australia	36.0	9.9	8.9	8.1	8.0	8.0	7.1	6.1	7.0	9.5	10.7	10.9	9.7	8.5	8.6
Iceland	38.4	1.0	1.3	0.9	0.6	0.5	0.6	1.7	1.8	1.5	3.0	4.3	4.7	5.0	2.1
Spain	42.0	18.2	20.1	21.5	21.0	20.5	19.5	17.3	16.3	16.3	18.4	22.7	24.2	22.9	19.9
UK	42.0	10.5	10.7	11.0	11.0	9.8	7.8	6.0	5.8	8.2	9.9	10.2	9.2	8.2	9.1
Portugal	42.2	7.8	8.6	8.7	8.6	7.1	5.8	5.1	4.7	4.2	4.1	5.6	6.9	7.2	6.5
Greece	44.0	7.9	8.1	7.8	7.4	7.4	7.7	7.5	7.0	7.7	8.7	9.7	9.6	10.0	8.2
Canada	46.0	11.9	11.3	10.5	9.6	8.8	7.8	7.5	8.1	10.4	11.3	11.2	10.4	9.5	9.9
Ireland	46.3	14.0	15.5	17.0	17.0	16.8	16.1	14.6	13.2	14.7	15.5	15.6	14.2	12.9	15.2
Norway	47.4	3.4	3.2	2.6	2.0	2.1	3.2	4.9	5.2	5.5	5.9	6.0	5.4	4.9	4.2
Germany	47.4	7.9	7.9	8.0	7.7	7.6	7.6	6.9	6.2	6.7	7.7	8.9	9.6	9.4	7.9
Finland	49.2	5.4	5.2	5.0	5.4	5.1	4.5	3.5	3.5	7.6	13.1	17.9	18.4	17.2	8.6
Austria	50.8	3.8	3.9	4.2	4.5	4.9	4.7	4.3	4.7	5.2	5.3	6.1	5.9	5.9	4.9
France	51.7	8.3	9.7	10.2	10.4	10.5	10.0	9.4	8.9	9.4	10.3	11.7	12.3	11.6	10.2
Italy	51.9	7.7	8.5	8.6	9.9	10.2	10.5	10.2	9.1	8.6	8.8	10.2	11.3	12.0	9.7
Netherlands	55.8	11.0	10.6	9.2	8.4	8.0	7.8	6.9	6.0	5.5	5.4	6.5	7.6	7.1	7.7
Belgium	58.1	13.3	13.4	12.4	11.8	11.5	10.4	9.4	8.8	9.4	10.4	12.1	13.1	13.0	11.5
Denmark	60.1	10.4	10.1	9.0	7.8	7.8	8.6	9.3	9.6	10.5	11.3	12.3	12.2	10.0	9.9
Sweden	63.0	3.5	3.1	2.9	2.5	2.1	1.7	1.5	1.6	3.0	5.3	8.2	8.0	7.7	3.9

Source: Organisation for Economic Co-operation and Development, *OECD Economic Outlook June 1996*, op. cit., p.A.24,A31.

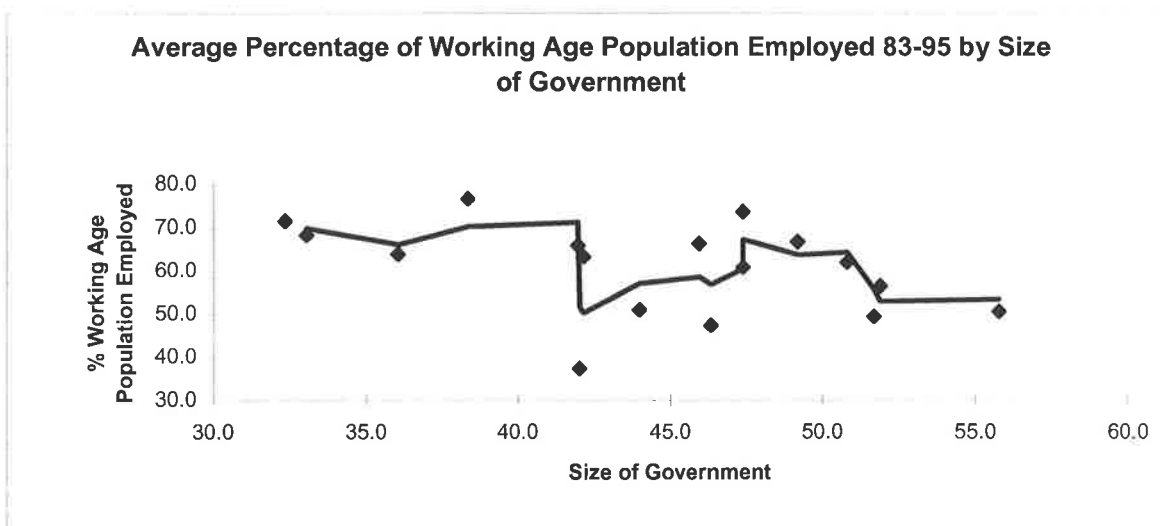
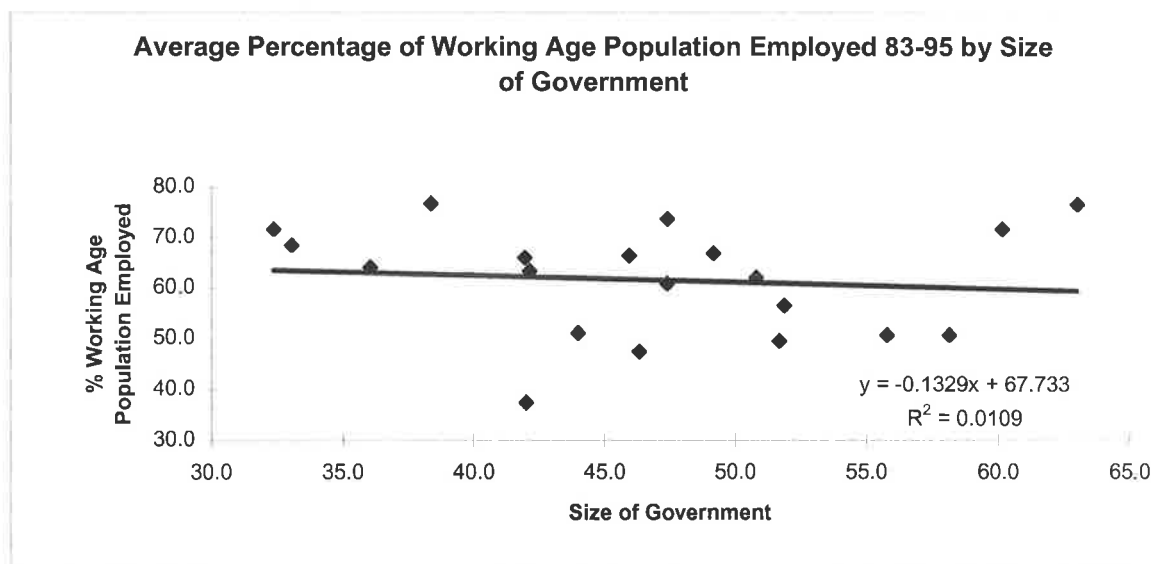




Percentage of Working Age Population Employed by Size of Government 1983 to 1995

Nation	G:GDP 83-95	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	Ave 83-95
		1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
Japan	32.4	70.3	70.0	69.9	69.6	69.6	70.3	71.0	72.0	73.1	73.6	73.6	73.5	73.4	71.5
United States	33.0	62.1	64.8	65.6	66.6	68.1	69.4	70.5	70.9	69.4	69.1	69.7	70.9	71.5	68.4
Australia	36.0	59.9	61.0	62.5	63.7	63.9	65.3	67.5	67.2	64.5	63.0	62.6	64.2	66.6	64.0
Iceland	38.4	76.3	76.3	78.4	80.2	83.5	79.5	77.0	75.7	74.5	74.2	73.4	73.7	74.1	76.7
UK	42.0	62.2	63.1	63.7	63.7	65.5	68.3	70.7	70.9	67.7	65.5	64.8	65.4	65.8	65.9
Spain	42.0	37.8	35.6	34.2	35.1	36.5	38.0	40.5	41.8	41.6	39.3	35.2	34.0	35.6	37.3
Portugal	42.2	62.1	61.3	60.7	60.6	62.4	64.2	66.6	67.5	69.2	64.3	62.2	61.5	60.8	63.3
Greece	44.0	52.0	51.7	51.8	51.7	51.3	51.8	51.7	52.2	49.6	49.4	49.2	50.0	50.0	51.0
Canada	46.0	61.7	62.9	64.6	66.2	67.7	69.5	70.3	69.8	66.9	65.2	65.1	65.7	66.2	66.3
Ireland	46.3	49.6	47.3	45.2	45.2	45.5	45.5	46.8	49.1	47.6	46.7	47.1	49.0	50.6	47.3
Norway	47.4	73.1	73.5	74.9	77.2	78.2	76.9	73.8	72.8	71.6	71.0	70.5	71.4	72.7	73.7
Germany	47.4	59.4	59.1	59.4	60.3	60.8	61.1	61.7	62.9	64.4	62.5	60.4	59.5	59.2	60.8
Finland	49.2	71.1	71.3	71.9	71.4	71.2	71.6	73.0	72.6	67.4	60.8	55.3	54.5	56.0	66.8
Austria	50.8	62.4	61.7	61.3	61.4	61.0	61.4	62.4	62.7	62.9	63.5	61.9	61.9	61.2	62.0
Italy	51.7	51.3	50.2	49.9	49.5	49.2	48.8	49.2	50.1	50.6	49.9	48.8	47.6	47.1	49.4
France	51.9	58.6	56.9	56.2	56.1	56.0	56.4	57.1	57.7	57.3	56.5	54.9	54.8	55.5	56.5
Netherlands	55.8	46.4	46.2	46.8	48.0	48.5	49.4	50.5	52.2	53.6	54.2	53.9	53.4	54.2	50.6
Belgium	58.1	48.8	48.2	48.9	49.3	49.6	50.7	51.9	53.1	52.9	52.3	51.0	50.2	50.4	50.6
Denmark	60.1	69.9	71.0	72.9	74.8	75.1	74.2	73.5	72.3	70.7	69.8	68.7	68.0	69.6	71.6
Sweden	63.0	77.8	78.3	78.1	78.7	79.4	80.3	81.0	81.0	78.8	74.8	69.4	68.3	69.4	76.6

Source: Organisation for Economic Co-operation and Development, *OECD Economic Outlook June 1996*, op. cit., p.A22,A24,A31. Note: The percentage of working age population employed is derived from subtracting the unemployment rate (commonly used definitions) from the labour force participation rate.



The major findings suggested by these tables are that:

- There is a correlation between the size of government and economic outcomes, but the correlation is modest.
- There was some evenness in average economic outcomes for those nations in which government accounted for 45-47 per cent of GDP or less. For nations in which governments take up more than this in GDP, average economic outcomes were lower, but this trend was modest, rather than striking.
- Some nations with large government sectors had relatively sound economic outcomes, while some of the nations with smaller government sectors did not achieve strong economic outcomes.
- Other factors may be much more decisive in determining economic outcomes than simply the size of government.

However, the findings are not inconsistent with the view that there are certain limitations on the size of government. Firstly, studies have indicated that government consumption expenditure may reduce economic performance.³⁷⁴ Secondly, the findings for the 1983 to 1995 period indicate that, where the government sector becomes very large, economic performance can suffer. Finally, history indicates that rapid increases in taxation can reduce private sector and total growth.

However, overall, the findings cast doubt on conventional rationalist economic wisdom in Australia. The OECD figures indicate that government averaged 36 per cent of GDP in Australia in the 1983 to 1995 period, compared with an average for small OECD nations of 48 per cent. Given that there was no significant correlation between the size of government and economic performance for nations in which government contributed 45-47 per cent of GDP or less, the findings indicate that the rationalist argument that Australia should reduce the size of its government sector may be ill considered. The findings indicate that other factors may be more important in determining economic performance.

How can this be so? Rationalists often highlight the argument that the government must be as small as possible, so that only minimal taxes need to be imposed on companies, leading to high profits, investment and growth. This logic appears to have considerable validity. Globalisation also means that nations need to have competitive business tax regimes if they are to attract global investment. However, there must be an explanation for the findings noted above. It may be that the small government policy prescription becomes a weakness if taken too far. There would certainly be a point at which there would be insufficient taxes to finance the economic infrastructure needed to maximise the growth of the private sector and the economy as a whole. It may be that a balance needs to be established between minimising government spending and taxation on the one hand, and undertaking sufficient public investment to maximise the growth of the private sector and the overall economy on the other. As Vince Fitzgerald has argued:

A very high tax jurisdiction will drive economic activity away to more favourable commercial environments, but an extremely low tax jurisdiction is not likely to offer a particularly competitive environment either. It is likely to be one in which the services and infrastructure that are important to business are under-provided... Obviously, a *balance* needs to be struck...³⁷⁵

Government investment aimed at supporting private sector expansion may be an important part of creating national affluence. Battin and Smythe have argued that the key policy change of the modern (rationalist) era has not been from protection to free trade, but from high levels of government investment during the three Keynesian decades following World War Two, to low levels of public investment in the last 25 years. They argue that the level of public investment was a key reason

³⁷⁴ William Easterly & Sergio Rebelo, *op. cit.*, p.423; and Palle Anderson & David Gruen, *op. cit.*, p.12,13.

³⁷⁵ V. W. Fitzgerald Reform, *Australia's Tax System: Integrating the Agenda*, *op. cit.*, p.1.

why full employment prevailed throughout the immediate post-war decades, but the modern era has been dogged by continuous mass unemployment.³⁷⁶

As noted in chapter two, a range of studies have demonstrated a significant positive correlation between public investment and positive economic outcomes such as economic growth and growth in private investment.³⁷⁷ For example, a study by Easterly and Rebelo found that, while public consumption expenditure appears to have a negative effect on growth, public investment has a positive effect.³⁷⁸ Anderson and Gruen noted a range of modern articles showing that public investment increases economic welfare and concluded: '...[R]educing public investment merely as a means of cutting the government borrowing requirement is not an optimal long run policy.'³⁷⁹ As Lester Thurow has argued: '...the real issue is not public versus private spending. The real issue is investment (public and private) versus consumption (public and private).'³⁸⁰

These findings have implications for rationalists in the modern era who persist with cuts to economically beneficial public investments and prevent the emergence of the economic and industry strategy needed to maximise economic outcomes. Examples include cuts to public infrastructure spending and the failure to quickly create a world class vocational education and training system. A key rationalist weakness is that the desire for small government subordinates all other considerations, meaning that spending crucial to maximising the output of the private sector and the economy as a whole is cut, or not undertaken. Indeed, small government policies suffer from the fact that, as government expenditures and taxation are cut, effectively releasing further funds to be allocated by the private sector, much of this money will be spent on consumption, rather than investment. By contrast, government could invest all such money at the margin of government spending.

More Dislocation

As with tariff cuts and free market infrastructure reform, small government policies brought considerable gross employment cuts. As the table below illustrates, public sector employment at the Commonwealth, State and total public sector level fell during the period, both in relative and absolute terms. Between February 1984 and February 1996, public sector employment fell by 88,100, with 67,900 of this reduction coming from the Commonwealth. Had public sector employment maintained its February 1984 share of total employment, it would have been 563,500 higher at February 1996, all other things being equal.

³⁷⁶ Tim Battin & Paul Smythe, *From War Economy to Deregulation: Australian Keynesianism in the Long Run*, Unpublished, 1998, p.1-15.

³⁷⁷ Studies demonstrating that public investment can improve economic outcomes include: David A. Aschauer, 'Is public expenditure productive?', *Journal of Monetary Economics*, vol.23, no.2, pp.177-200; and William Easterly & Sergio Rebelo, op. cit., pp.417-458.

³⁷⁸ William Easterly & Sergio Rebelo, op. cit., p.423,430-434.

³⁷⁹ Palle Anderson & David Gruen, op. cit., p.13.

³⁸⁰ Lester Thurow, *Head to Head: Coming Economic Battles Among Japan, Europe, and America*, Morrow, New York, USA, 1992, p.269.

Public and Private Employment (in thousands, seasonally adjusted) February 1984 to February 1996

Date	Commonwealth	State	Local	Total Public	Total Private	Total Emp
Feb-84	420.1	1,085.6	148.0	1,653.7	3,600.1	5,253.7
Feb-85	429.0	1,102.9	152.6	1,684.5	3,815.4	5,499.9
Feb-86	434.0	1,138.6	156.0	1,728.7	4,059.8	5,788.5
Feb-87	440.7	1,138.8	155.1	1,734.7	4,155.0	5,889.6
Feb-88	431.4	1,141.6	156.3	1,729.4	4,419.7	6,149.1
Feb-89	421.0	1,130.6	156.1	1,707.7	4,657.6	6,365.3
Feb-90	403.2	1,171.5	159.4	1,734.1	4,784.1	6,518.2
Feb-91	412.2	1,150.5	160.6	1,723.4	4,673.8	6,397.2
Feb-92	400.1	1,141.4	161.7	1,703.1	4,473.2	6,176.3
Feb-93	382.2	1,113.7	161.8	1,657.7	4,613.9	6,271.6
Feb-94	360.0	1,069.4	158.3	1,587.7	4,711.7	6,299.4
Feb-95	360.0	1,059.4	154.3	1,573.8	4,972.5	6,546.3
Feb-96	352.2	1,058.3	155.1	1,565.6	5,141.3	6,706.9

Source: Australian Bureau of Statistics, *Wage and Salary Earners Australia March Quarter 1997*, Cat. no.6248.0, p.9-12.

Public and Private Employment (seasonally adjusted): Percentage of Total Employment

Date	Commonwealth	State	Local	Total Public	Total Private
Feb-84	8.00%	20.66%	2.82%	31.48%	68.53%
Feb-85	7.80%	20.05%	2.77%	30.63%	69.37%
Feb-86	7.50%	19.67%	2.69%	29.86%	70.14%
Feb-87	7.48%	19.34%	2.63%	29.45%	70.55%
Feb-88	7.02%	18.57%	2.54%	28.12%	71.88%
Feb-89	6.61%	17.76%	2.45%	26.83%	73.17%
Feb-90	6.19%	17.97%	2.45%	26.60%	73.40%
Feb-91	6.44%	17.98%	2.51%	26.94%	73.06%
Feb-92	6.48%	18.48%	2.62%	27.57%	72.43%
Feb-93	6.09%	17.76%	2.58%	26.43%	73.57%
Feb-94	5.71%	16.98%	2.51%	25.20%	74.80%
Feb-95	5.50%	16.18%	2.36%	24.04%	75.96%
Feb-96	5.25%	15.78%	2.31%	23.34%	76.66%

Source: These percentages are derived from figures provided in Australian Bureau of Statistics, *Wage and Salary Earners Australia March Quarter 1997*, Cat. no.6248.0, p.9-12.

These public employment reductions have caused disproportionate employment losses in regional and rural areas, as compared with city areas, as the IC admitted in their Regional Adjustment Report.³⁸¹ The Murray Bridge Council submission to the Kelty Report stated: 'More than anything else, the withdrawal of government and

³⁸¹ Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 1: Report*, op. cit., op. cit., p.187.

semi-government employees from regional Australia is impacting on the viability of towns and cities outside the metropolitan area.³⁸²

Conclusion

Rationalists often advocate significant reductions in the size of government, believing strongly in the capacity of free-markets to deliver prosperity. The analysis above showed that there was not a strong correlation between the size of government and economic outcomes. It may be that a more balanced approach is required than the rationalist small government approach, which may produce insufficient public investment to maximise the growth of the private sector and the economy as a whole.

Of course, the finding that public investment can increase economic growth, while important, does not provide significant guidance on what specific public investments will increase economic growth. Australia's economic development is crucially dependent on economists and policymakers identifying those areas in which markets fail and government investment is required. Unfortunately, as part two will demonstrate, this is the very exploration that economic rationalists - in their certainty that free markets can produce rising economic prosperity - have stopped undertaking.

This thesis suggests two broad directions for government investment. In chapter two, the evidence and a range of studies suggested that strategic investment in economic infrastructure has an important role to play in fostering national economic development. In part two, market failures in areas crucial to establishing an innovation-driven economy are identified and suggestions are made for public investment in areas vital to creating competitive advantage through innovation, such as R&D, technology diffusion, education and training, management and export marketing. Given the increasing emergence of a knowledge-based economy, these latter investments may be the most crucial in driving national economic development.

This may be a more appropriate balance than the rationalist small government approach. On the one hand, Australia's position as a nation with a relatively small government by OECD standards could be maintained, thereby fostering growth through the dynamism of the private sector, and by attracting global capital. However, government investment directed to creating an innovation-driven economy could be increased by 2-4 per cent of GDP, paid for by cuts to politically motivated industry programs, elimination of spurious tax concessions, and perhaps a small increase in taxation, if necessary. Such an approach - by building the capacity of firms to compete on international markets through innovation - might produce greater employment growth, restructuring and competitiveness than the rationalist small government approach. It might also offset the major downside of so many rationalist policies, namely the significant amount of structural dislocation they cause.

³⁸² Taskforce on Regional Development, *Developing Australia: A Regional Perspective: Volume 1: Report*, op. cit., p.67.

Chapter Four: Restructuring and Employment Growth Under Rationalism

Introduction

Rationalists claim that a key benefit to ensue from their policies is efficient resource allocation, which means their policies should lead to speedy restructuring of the Australian economy. The main task in this chapter is to examine the restructuring and employment growth outcomes achieved in the period. These facts provide evidence against which the analysis in chapters one to three can be further assessed.

The 1983 to 1996 period is a good era to test whether rationalist policies are useful in bringing desirable structural change because much of the rationalist agenda was implemented in this time. The policies of the period included not just tariff cuts, infrastructure reform and small government policies, but also significant financial deregulation, wage restraint and partial deregulation of the labour market, and minimal active industry policy. The economic environment also provided significant scope for market reforms to work effectively. Apart from the 1990-91 recession, much of the period involved a strongly growing economy and a high profit share.

The effectiveness of rationalist restructuring in the period will be measured in the following ways:

1. Changes in the Composition of Exports
2. Exports
3. The Trade Account, the Current Account and the Net Foreign Debt
4. National Savings
5. Economic Growth
6. Employment and Unemployment

Of course, this approach does not bring conclusive evidence on the utility of rationalist policies. The causes of the economic outcomes in the period were many. However, rationalism was the dominant framework of the period, so analysing the economic progress achieved appears useful. The final part of the chapter will draw conclusions on the dislocation caused by rationalist policies and their implications for restructuring and employment growth.

1. Changes in the Composition of Trade

Trends in World Trade

Determining the desirable directions for the restructuring of Australia's composition of exports can usefully be informed by trends in world trade. In recent decades,

world trade growth has been strong in manufactures, but weak in agriculture and mining. Industrialised nations have generally restructured their export composition to match these trends, as shown on the tables below.

North America: Composition of Merchandise Exports 1963 to 1994

Industry	1963	1973	1983	1993	1994
Manufactures	53.2	57.8	62.9	72.8	73.9
Agriculture	29.0	27.6	21.3	14.1	14.0
Mining	12.2	10.9	11.5	7.1	6.7

Source: World Trade Organisation, *International Trade: Trends and Statistics 1995*, World Trade Organisation, Geneva, 1995, p.30. Note: Numbers may not add up to 100 due to unspecified products.

Western Europe: Composition of Merchandise Exports 1963 to 1994

Industry	1963	1973	1983	1993	1994
Manufactures	71.8	75.8	71.7	77.8	78.9
Agriculture	18.3	15.5	13.0	11.9	11.8
Mining	8.5	7.6	13.0	6.6	6.2

Source: World Trade Organisation, *International Trade: Trends and Statistics 1995*, op. cit., p.31. Note: Numbers may not add up to 100 due to unspecified products.

Japan: Composition of Merchandise Exports 1963 to 1994

Industry	1963	1973	1983	1993	1994
Manufactures	90.0	93.7	95.7	95.5	95.2
Agriculture	8.8	4.1	1.8	1.0	1.0
Mining	1.2	1.2	1.5	1.4	1.4

Source: World Trade Organisation, *International Trade: Trends and Statistics 1995*, op. cit., p.31. Note: Numbers may not add up to 100 due to unspecified products.

Around the world, these trends have been marked in the last fifteen years, as shown below.

Composition of World Merchandise Exports 1980 to 1994

Industry	1980	1984	1994
Manufactures	53.9	58.5	74.3
Agriculture	14.7	14.5	11.9
Mining	27.7	22.7	10.7

Source: World Trade Organisation, *International Trade: Trends and Statistics 1995*, op. cit., p.25,77. Note: Numbers may not add up to 100 due to unspecified products.

Manufactured exports now dominate world trade. Services comprise a significant and growing share of world trade, while mining and agriculture are a small and contracting share of world trade.

Composition of World Exports 1995

Industry	\$ Billions	Percentage Share
Manufactures	3,640	61.69
Services	1,170	19.83
Agriculture	580	9.83
Mining	510	8.64
Total	5,900	100.00

Source: World Trade Organisation, *Annual Report 1996*, vol.1, World Trade Organisation, Geneva, 1996, p.14.

Australia's Trade Dilemma

These trends in world trade produced significant challenges for the Australian economy in recent decades because Australia has traditionally had a commodity dependent export base.

In particular, the long run decline of agriculture on world markets has been a decisive factor in Australia's relative economic decline. Historically, agriculture was vital because of its contribution to national exports. From 1920 to 1950, agriculture trended at 75 percent of export earnings.³⁸³ In that era, Australia's agriculture exports were conducive to national economic prosperity because agriculture was well rewarded on world markets. However, the terms of trade for agriculture have been in long run decline, falling from 245 index points in 1949-50, to an average of around 100 in the 1970s, and then further to around 73 by 1986-87.³⁸⁴ Australia's over-reliance on agriculture has been the key factor in the long run decline in Australia's overall terms of trade, which fell 43 percent in the 30 years from 1960.³⁸⁵

On the other hand, manufacturing and services, which have been handsomely rewarded on world markets in recent decades, have traditionally provided only a minority of Australian exports. In addition, the manufacturing exports that Australia did produce, were largely comprised of simply transformed manufactures (STMs).³⁸⁶ Competitiveness in STMs is often strongly dependent on cost factors. For this reason, much of the production and export of STMs has shifted to developing nations in the last few decades, particularly in Asia, where producers enjoy cost advantages through low wages, minimal environmental standards, low taxes and tax incentives.³⁸⁷ As a consequence, many industrialised nations – which could no longer compete in such segments due to their high wage and tax rates - restructured their manufacturing industry towards higher value-added market segments over the last few decades.³⁸⁸

³⁸³ Kym Anderson & Ross Garnaut, op. cit., p.22.

³⁸⁴ Geoffery Lawrence, *Capitalism and the Countryside: The Rural Crisis in Australia*, Pluto Press, Sydney, 1987, p.28.

³⁸⁵ Bill Mansfield, ch.9 'Trade unions and the challenge of change', in Michael Costa & Michael Easson (eds), op. cit., pp.187-206 at p.191.

³⁸⁶ Peter Ewer, Winton Higgins & Annette Stevens, op. cit., p.37,38.

³⁸⁷ United Trades and Labour Council of South Australia, *Submission to the Parliamentary Inquiry Into Tariffs and Industry Development*, Unpublished, 1992, p.8.

³⁸⁸ Pappas, Carter, Evans & Koop/Telesis, op. cit., p.29.

These trends suggest that Australia should have reduced its commodity reliance and begun to restructure its export base towards high value-added manufactures and services from the 1960s, as many other industrial nations did in the period.

This restructuring is also imperative if Australia wishes to create more employment.

Australia's commodity industries provide few jobs, and their role as employers is declining. Employment in agriculture as a percentage of total employment fell from 26 percent in 1930-31, to 14 percent by 1950-51, and to eight per cent in 1970-71.³⁸⁹ The decline of agriculture's share of total employment continued in the Hawke-Keating years. Between 1982-83 and 1995-96, employment in agriculture, fishing and forestry fell from 6.6 per cent to 5.1 per cent of total employment. Mining also provides few jobs. Between 1982-83 and 1995-96, employment in mining fell from 1.5 to 1.0 per cent of total employment.³⁹⁰

By contrast, services and ETMs are vital to employment growth. Between 1982-83 and 1995-96, when total employed persons grew by 1.90 million, employment in services grew by more than two million, from 4,653,200 to 6,681,200, or from 73.5 to 80.5 per cent of total employment.³⁹¹ ETMs are also vital to employment creation in high wage nations because STM firms, although more labour intensive, struggle to compete against low tax, low wage, developing nations. Among G7 countries in the 1973 to 1993 period, employment growth in high technology, high R&D intensity manufacturing sectors was faster than the manufacturing average, while employment growth in low technology, low R&D intensity sectors was lower than the manufacturing average.³⁹²

ETM production also plays a role in propelling services, the key industry providing direct employment.³⁹³ ETMs propel services because they are important in creating national affluence, which in turn, brings spending on a range of services. ETMs also propel the growth of high wage business services, which are vital inputs in ETM production.³⁹⁴ Exports of services and ETMs are also important to employment creation because they constitute Australia's best chance to achieve significant export growth, which is vital to enabling the economy to grow rapidly, without running unsustainably large current account deficits.

Thus, for several decades, the challenge for Australia has been to develop a solid core of innovative, fast growing, high exporting ETM and high value-added service firms.

³⁸⁹ Australian Industries Assistance Commission, *op. cit.*, p.4.

³⁹⁰ Australian Bureau of Statistics, *Australian Economic Indicators December 1991*, Cat. no.1350.0, p.91; and Australian Bureau of Statistics, *Australian Economic Indicators June 1997*, Cat. no.1350.0, p.67. These figures are yearly averages.

³⁹¹ Australian Bureau of Statistics, *Australian Economic Indicators December 1991*, Cat. no.1350.0, p.91; and Australian Bureau of Statistics, *Australian Economic Indicators June 1997*, Cat. no.1350.0, p.67. These figures are yearly averages.

³⁹² Organisation for Economic Co-operation and Development, *Technology and Industrial Performance: Technology Diffusion, Productivity, Employment and Skills, International Competitiveness*, Organisation for Economic Co-operation and Development, Paris, 1996, p.83.

³⁹³ Pappas, Carter, Evans & Koop/Telesis, *op. cit.*, p.22.

³⁹⁴ Stephen S. Cohen & John Zysman, *op. cit.*, p.xiii,3,4,6,20,21.

Restructuring Australia's composition of exports in this way is crucial to producing sustainable economic, export and employment growth.

Australia's Composition of Exports: 1950 to 1983

The purpose of this section is to provide a comparison against which the Keating-Hawke years can be measured. The following shows that, in the three decades prior to the Labor Government, Australia largely failed to capitalise on the growth of world manufactured exports, and continued to be very reliant on commodities. It is this export structure that underpinned Australia's declining living standards, relative to many other economies.

While world trade shifted significantly towards manufactures, and the percentage of manufactures in Australia's total imports rose from just over 50 per cent in the 1950s and early 1960s to over 75 per cent from the late 1960s onward,³⁹⁵ Australian exports of manufactures as a percentage of total merchandise exports increased from 11 per cent in the five years ending 1964-65, to 23 per cent in the 5 years to 1984-85. Australia's share of world trade in manufactures fell from 0.7 per cent over the period from 1971-1975 to 0.4 per cent in the 1981-1985 era.³⁹⁶

Australia continued its very heavy dependence on exports of unprocessed primary commodities over the period. Agriculture and mining exports comprised 89 per cent of merchandise exports in the 5 years to 1964-65 and 77 per cent of merchandise exports in the 5 years to 1984-85. While agriculture exports fell from 75 to 36 per cent of total exports over the period, mineral and fuel exports rose from 14 to 41 per cent.³⁹⁷

Composition of Merchandise Exports 1960 to 1984-85 (average percentage for the five years ending)

Industry	1964-65	1969-70	1974-75	1979-80	1984-85
Agriculture	75	59	49	42	36
Minerals, Fuels	14	23	31	36	41
Manufactures	11	18	20	22	23

Source: Peter Ewer, Winton Higgins & Annette Stevens, *Unions and the Future of Australian Manufacturing*, Allen and Unwin, Sydney, 1987, p.31 compiled the table using various issues of Australian Bureau of Statistics, *Overseas Trade (Foreign Trade)*.

Thus, during this period, agriculture and manufacturing underwent some of the necessary re-alignment to the structure of world trade realities. However, progress was slow and only a small proportion of the necessary restructuring was achieved.

Restructuring Under the Hawke and Keating Governments

As shown below, the restructuring of Australia's export base quickened under the Hawke and Keating Governments, particularly after the mid-to-late 1980s.

³⁹⁵ Kym Anderson & Ross Garnaut, op. cit., p.23.

³⁹⁶ Peter Ewer, Winton Higgins & Annette Stevens, op. cit., p.30,31.

³⁹⁷ *ibid.*, p.30,31.

Australia's reliance on commodities declined. Between 1982-83 and 1995-96, rural and mining exports fell from 71.1 per cent to 55.9 per cent of Australia's total exports. Manufacturing, which was in disarray when the Labor Government came to power, consolidated its position in the early-to-mid 1980s, aided by government plans in steel, TCF, PMV and heavy engineering.³⁹⁸ Then, between 1988-89 and 1995-96, the manufacturing share of total exports rose from 11.1 per cent to 18.7 per cent. Also promising was the growth in services exports, which grew from 17.7 per cent to 23.4 per cent of total exports between 1982-83 and 1995-96.

Composition of Exports 1982-83 to 1995-96 (\$m. and percentage of total exports)

Year	Rural	Minerals and Metals	Manufactures	Services	Other Non-Rural	Exports
82-83	7,904 (31.08)	10,171 (40.00)	2,582 (10.15)	4,500 (17.70)	273 (1.07)	25,430 (100.00)
83-84	8,978 (31.42)	11,410 (39.93)	2,921 (11.49)	4,913 (17.19)	352 (1.23)	28,574 (100.00)
84-85	11,194 (31.74)	14,760 (41.84)	3,365 (9.54)	5,543 (15.71)	411 (1.17)	35,273 (100.00)
85-86	12,198 (31.57)	15,853 (41.03)	3,512 (9.09)	6,485 (16.79)	585 (1.51)	38,633 (100.00)
86-87	13,194 (30.13)	16,863 (38.51)	5,041 (11.51)	7,756 (17.71)	940 (2.15)	43,794 (100.00)
87-88	15,341 (29.86)	19,102 (37.18)	5,864 (11.41)	9,862 (19.20)	1,208 (2.35)	51,377 (100.00)
88-89	16,069 (29.17)	20,442 (37.11)	6,128 (11.12)	11,196 (20.32)	1,255 (2.28)	55,090 (100.00)
89-90	15,344 (25.33)	24,014 (39.64)	7,707 (12.72)	12,023 (19.84)	1,499 (2.47)	60,587 (100.00)
90-91	14,022 (21.30)	27,505 (41.78)	9,385 (14.26)	13,681 (20.78)	1,243 (1.89)	65,836 (100.00)
91-92	15,603 (22.46)	27,596 (39.73)	10,394 (14.96)	14,584 (20.10)	1,281 (1.84)	69,458 (100.00)
92-93	17,080 (22.48)	29,266 (38.52)	12,392 (16.31)	15,947 (20.99)	1,284 (1.69)	75,969 (100.00)
93-94	18,445 (22.38)	29,192 (35.42)	14,346 (17.40)	18,603 (22.57)	1,839 (2.23)	82,425 (100.00)
94-95	19,045 (21.97)	29,702 (34.26)	15,989 (18.44)	20,247 (23.35)	1,710 (1.97)	86,693 (100.00)
95-96	21,300 (21.67)	33,592 (34.18)	18,374 (18.69)	22,964 (23.37)	2,040 (2.08)	98,270 (100.00)

Source: The figures for 1987-88 to 1995-96 are from Australian Bureau of Statistics, *Australian Economic Indicators June 1997*, Cat. no.1350.0, p.14,15. The figures for 1982-83 to 1986-87 are from Australian Bureau of Statistics, *Australian Economic Indicators January/February 1993*, Cat. no.1350.0, p.18,24,25.

Most importantly, as shown below, the growth in manufactured exports was entirely made up of growth in ETM exports. Between 1988-89 and 1995-96, ETM exports grew from 13.2 to 23.4 per cent of merchandise exports, while simply transformed manufactures declined from 11.2 to 10.3 per cent of merchandise exports.

³⁹⁸ Pappas, Carter, Evans & Koop/Telesis, op. cit., p.3.

Percentage of Manufactures in Total Merchandise Exports 1988-89 to 1995-96

Year	STMs	ETMs	Total Manufactures
1988-89	11.2	13.2	24.4
1989-90	10.5	14.8	25.3
1990-91	9.9	16.3	26.2
1991-92	9.7	17.9	27.6
1992-93	9.5	19.9	29.3
1993-94	9.8	21.4	31.2
1994-95	10.9	22.6	33.5
1995-96	10.3	23.4	33.7

Source: The figures for 1991-92 to 1995-96 are from Department of Foreign Affairs and Trade, *Composition of Trade Australia 1995-96*, Department of Foreign Affairs and Trade, Canberra, 1996, p.19. The figures for 1988-89 to 1990-91 are from Department of Foreign Affairs and Trade, *Composition of Trade Australia 1992-93*, Department of Foreign Affairs and Trade, Canberra, 1993, p.20.

Between 1988-89 and 1995-96, ETM exports grew by an average of 15.6 per cent annually, compared with 8.2 per cent average annual growth among all exports.

Growth in Exports of Manufactures 1988-89 to 1995-96 (percentage change on the previous year)

Year	STMs	ETMs	Manuf's	Total Exports
1988-89	23.9	6.3	13.9	8.4
1989-90	4.2	24.8	15.4	11.5
1990-91	0.7	17.6	10.6	6.7
1991-92	4.8	12.5	9.7	5.2
1992-93	7.7	22.4	17.3	10.4
1993-94	9.6	14.5	12.9	6.2
1994-95	15.7	9.8	11.6	3.9
1995-96	7.9	17.0	14.0	13.3
Ave 1988-89 to 1995-96	9.3	15.6	13.2	8.2

Source: The figures for 1991-92 to 1995-96 are from Department of Foreign Affairs and Trade, *Composition of Trade Australia 1995-96*, op. cit., p.20. The figures for 1988-89 to 1990-91 are from Department of Foreign Affairs and Trade, *Composition of Trade Australia 1992-93*, op. cit., p.21.

The table below shows that, while there was only one ETM exporter in Australia's top 20 exports in 1995-96, many are growing very quickly, if from a low base. This suggests that significant restructuring towards ETM exports has begun.

Australia's Top ETM Export Sectors in 1995-96

Rank	Sector	\$m at 95-96	Trend Growth 91-92 to 95-96
12	Computers and office machines, parts etc	1,458	25.1
21	Aircraft and associated equipment, nes	711	7.9
22	Telecommunications equipment	687	19.8
23	Medicaments	668	22.4
25	Internal combustion piston engines	570	9.3
26	Passenger motor cars	557	7.8
34	Other industry-specific machinery	459	24.9
37	Motor vehicle parts, etc	443	8.2
38	Ships, boats and floating structures	434	6.9
41	Computers	411	19.6
45	Electricity distributing equipment (SITC 778)	397	30.8
47	Electrical equipment for circuits	391	24.9
51	Photographic & cinematographic supplies	383	18.1
54	Measuring and checking equipment	319	7.7
57	Civil engineering equipment	300	16.6
58	Heating and cooling equipment	294	26.5
63	Medicinal and pharmaceutical products	224	8.4
71	Mechanical handling equipment	222	14.0
72	Electricity distributing equipment (SITC 773)	184	16.1
74	Medical instruments and appliances	180	20.4
	Total exports	75,999	7.7

Source: Department of Foreign Affairs and Trade, *Composition of Trade Australia 1995-96*, op. cit., p.21,24,25.
Note: 'nes' denotes not elsewhere specified.

The 1993 McKinsey report confirmed that the rise in ETM exports from the late 1980s represented a structural shift. The study estimated that there were around 700 emerging ETM exporters in the SME category. The report noted two types of emerging exporters. Some 20-25 per cent of the 700 emerging firms were 'born global', meaning they began viewing the world as their marketplace. These firms, exported, on average, 76 per cent of their output, contributed \$1.7 billion in exports and expected to be exporting \$3-6 billion by 1998. The other type of emerging ETM exporter was the 'domestic based firm', which comprised 75-80 per cent of emerging exporters, many of which had only recently begun exporting after a period of significant employment decline and major productivity increases. Indeed, 'domestic based firms' had begun exporting after an average of 27 years of domestic activity. The report claims that these firms have changed their attitudes in the last 10 years from viewing exports opportunistically, selling only the occasional surpluses created during periodic domestic downturns, to viewing exports strategically, as a core part of their business. Such firms were exporting an average of 20 per cent of total sales and are seeking to increase this 30 to 40 per cent. Overall, the report claimed there had been a structural shift towards an export culture, with firms expecting to, on average, almost double their exports in the 1993-1997 period. Only five per cent of

the emerging exporters planned to reduce their ETM exports when the recession ended.³⁹⁹

An Export Structure for High Growth and National Affluence?

The figures above show that after several decades of minimal positive structural change, Australia's export to GDP ratio, proportion of ETM, manufacturing and service exports have increased and its dependence on commodities is diminishing. Thus, there is some truth in Graham Richardson's conclusion: 'The change to a broad based economy rather than one totally reliant on commodities will take a long, long time. Given that we began three or four decades too late, Hawke and Keating have made a brave start.'⁴⁰⁰

However, much of Australia's restructuring task remains yet to be completed. With the decline in prices paid for unprocessed commodities on world markets relative to ETMs and sophisticated services, Australia's export structure will continue to restrain its economic performance. While manufacturing and service exports together comprise more than 80 per cent of world trade,⁴⁰¹ they make up only 42 per cent of Australian exports in 1995-96.⁴⁰² While mining and rural products declined to only 18 per cent of world trade,⁴⁰³ Australia's over-reliance on commodities remained marked. In 1995-96, 56 per cent of Australia's exports were made up of rural and mining products.⁴⁰⁴ Agriculture and mining sectors comprised 19 of Australia's top 20 merchandise exporters in 1995-96, while only one of Australia's top 20 merchandise export sectors were ETMs.⁴⁰⁵ The restructuring of the Australian export base has barely begun.

Unfortunately, the failure to have even a quarter of exports made up of ETMs in a world trade environment dominated by ETMs meant that Australia ran a huge trade deficit in manufactures in the period. Whereas most developed nations achieve significant surpluses in ETMs or at least substantially cover their ETM imports with ETM exports, Australia runs massive trade deficits in ETMs.⁴⁰⁶ As shown below, in 1995-96, ETMs made up 75.5 per cent of Australia's merchandise imports, while manufactures made up 86.4 per cent of merchandise imports. The corresponding figures for ETM and manufacturing exports were 23.4 per cent and 33.7 per cent.⁴⁰⁷ Australia's trade deficit in ETMs rose from \$28.7 billion or 8.0 per cent of GDP (I) in 1988-89 to a massive \$40.5 billion or 9.35 per cent of GDP (I) in 1995-96, while its

³⁹⁹ McKinsey and Company & the Australian Manufacturing Council Secretariat, op. cit., p.2,3,6,7,9,10,13,14,37,69.

⁴⁰⁰ Graham Richardson, *Whatever It Takes*, Bantam, Sydney, 1994, p.358.

⁴⁰¹ World Trade Organisation, *Annual Report 1996*, vol.1, World Trade Organisation, Geneva, 1996, p.14.

⁴⁰² Australian Bureau of Statistics, *Australian Economic Indicators June 1997*, Cat. no.1350.0, p.15.

⁴⁰³ World Trade Organisation, *Annual Report 1996*, op. cit., p.14.

⁴⁰⁴ Australian Bureau of Statistics, *Australian Economic Indicators June 1997*, Cat. no.1350.0, p.15.

⁴⁰⁵ *ibid.*, p.24.

⁴⁰⁶ This structural weakness in Australian manufacturing was detailed in Pappas, Carter, Evans & Koop/Telesis, op. cit., p.5,28-30,129-131.

⁴⁰⁷ Department of Foreign Affairs and Trade, *Composition of Trade Australia 1992-93*, op. cit., p.19,20.

deficit in manufactures rose from \$29.8 billion or 8.3 per cent of GDP (I) to \$41.2 billion or 9.51 per cent of GDP (I) over the same period.⁴⁰⁸

Percentage of Manufactures in Total Merchandise Imports 1988-89 to 1995-96

Year	STMs	ETMs	Total Manufactures
1988-89	12.2	72.8	85.0
1989-90	11.3	74.0	85.3
1990-91	11.1	73.1	84.1
1991-92	11.6	73.1	84.6
1992-93	11.0	73.2	84.2
1993-94	10.8	74.7	85.5
1994-95	10.9	75.7	86.5
1995-96	10.9	75.5	86.4

Source: The figures for 1991-92 to 1995-96 are from Department of Foreign Affairs and Trade, *Composition of Trade Australia 1995-96*, op. cit., p.19. The figures for 1988-89 to 1990-91 are from Department of Foreign Affairs and Trade, *Composition of Trade Australia 1992-93*, op. cit., p.20.

Australia's weakness in ETMs is a key reason for its declining share of world trade, growth and employment. ETMs comprise more than three quarters of Australia's top 20 import sectors. Many of Australia's top imports are ETMs that are critical inputs to a great deal of production and/or are central elements of a first world consumption pattern. Such goods include: passenger motor cars and motor vehicle parts (\$5.4 billion), goods and special purpose vehicles (\$1.9 billion), computers and office machines and parts (\$5.7 billion), telecommunications equipment (\$2.6 billion), aircraft and associated equipment (\$2.1 billion) and a range of other essential inputs to manufacturing totalling well over \$5 billion.⁴⁰⁹ The widespread use of these goods ensures that, without a major ETM export base to pay for them, a significant external constraint on growth remains.

Australia's manufacturing industry remains far from restructured in many respects. The McKinsey report noted that 90 per cent of Australia's manufacturing companies were not exporting to any significant extent.⁴¹⁰ Australia also has no large strategic ETM exporters. By contrast, in many industrial nations, strategic exporters - defined as those with more than \$500 million in annual exports - contribute a significant proportion or a majority of total ETM exports.⁴¹¹

Australia's multinational enterprises (MNEs) are often multidomestics, not strategic exporters. Australia's tradeable sector is dominated by foreign multinationals, whereas Australian MNEs are concentrated in less tradeable sectors, where technology and transport costs favour overseas production.⁴¹² The key problem of

⁴⁰⁸ These figures are calculated from the original figures for imports of goods, exports of goods and GDP (I) provided in Australian Bureau of Statistics, *Australian Economic Indicators June 1997*, Cat. no.1350.0, p.3,14.

⁴⁰⁹ *ibid.*, p.30.

⁴¹⁰ McKinsey and Company & the Australian Manufacturing Council Secretariat, op. cit., p.iv.

⁴¹¹ Pappas, Carter, Evans & Koop/Telesis, op. cit., op. cit., p.129-131 found that Australia's strategic exporters, defined as those with more than \$US500 million in annual exports, accounted for only 14 per cent of Australia's complex factor exports, compared to 32 per cent in the United Kingdom, 47 per cent in the United States, 76 per cent in Japan, 66 per cent in Korea and 50 per cent in Canada.

⁴¹² Philip Yetton, Jeremy Davis & Peter Swan, op. cit., p.1-2,4,17,18,34,35.

this predominance of multinationals is that their invisible export earnings produce only as much export revenue as one to three strategic, multinational export firms could achieve. The *Going International* report concluded that, unless manufacturing can alter the pattern to a much higher percentage of strategic exporters, the industry will be of little assistance in reducing Australia's current account constraint on growth.⁴¹³ Further, strong clusters of firms in related industries have not developed, nor are there many examples of strong domestic rivalry among major competing domestic firms within sectors.⁴¹⁴

Australia's manufacturing industry lacks a major domestic advanced manufacturing technology (AMT) sector. A vibrant AMT sector is crucial to creating an innovation-driven economy and a thriving ETM sector.⁴¹⁵ The numerous foreign multinational companies in Australia's manufacturing industry have tended to rely on technology produced by their parent company, which limits the scope for innovation. Much of this technology has not been ideally suited to Australian conditions and has often been outdated and inefficient.⁴¹⁶

Australia has also been unable to create major pockets of resource-based value-adding, despite its highly competitive resource base. Even though Australia's leading companies are resource-based, the great majority of the resources are exported in their raw form and receive low prices.⁴¹⁷ *The Global Challenge* report estimated that widespread value-adding could add well over \$30 billion to exports.⁴¹⁸

Australia could also be achieving a much greater level of high value-added services exports. While services comprised a useful 23 per cent of Australia's services exports in 1995-96,⁴¹⁹ many first world nations are exporting a much greater proportion of service exports in total exports.⁴²⁰ More significantly, the LEK Partnership study noted that only 1.2 per cent of Australian service companies are involved in export at all and one sector, namely tourism, comprises 60 per cent of exports.⁴²¹ Further, much of the service sector continues to be marked by poor quality, low productivity, and widespread customer dissatisfaction. There is also little emphasis on investment in new market opportunities and value-adding.⁴²²

Thus, much restructuring remains to be achieved. Australia remains far too reliant on commodities, with too few exports coming from ETMs and sophisticated services. Australia's export and industry structure can not sustain growth in the economy of four per cent or more, as this leads to unsustainable increases in the current account

⁴¹³ *ibid.*, p.2,38,39.

⁴¹⁴ Pappas, Carter, Evans & Koop/Telesis, *op. cit.*, p.5,6.

⁴¹⁵ Rodin Genoff, *Industry Policy and Sectoral Plans Under Labor*, *op. cit.*, p.41,42.

⁴¹⁶ Greg Crough & Ted Wheelwright, *op. cit.*, p.103,104.

⁴¹⁷ Philip Yetton, Jeremy Davis & Peter Swan, *op. cit.*, p.65,66; and Pappas, Carter, Evans & Koop/Telesis, *op. cit.*, p.28,104.

⁴¹⁸ Pappas, Carter, Evans & Koop/Telesis, *op. cit.*, p.9,10,105,107.

⁴¹⁹ Australian Bureau of Statistics, *Australian Economic Indicators June 1997*, Cat. no.1350.0, p.15.

⁴²⁰ These are OECD figures noted in Pappas, Carter, Evans & Koop/Telesis, *op. cit.*, p.20.

⁴²¹ LEK Partnership, *op. cit.*, p.15.

⁴²² Roger A. Layton, ch.11 'Services are important' in Michael Costa & Michael Easson (eds), *op. cit.*, pp.219-228 at p.227.

deficit. Australia's export and industry structure thus prevent the substantial removal of mass unemployment.

2. Exports

Export Performance: 1950 to 1984

This section outlines the historical performance against which the export record of the Labor Governments can be measured. As the table below shows, the industrialised world capitalised on the rapid growth in world trade in the post-war decades. The most successful small nations dramatically increased their exports, with many doubling their exports to GDP ratio. By contrast, Australia's share of national product traded actually fell.⁴²³

Share of National Product Traded 1950-1984

Country	1950s	1960s	1970s	1984
Belgium	62	75	93	140
Netherlands	96	92	100	109
Norway	87	84	89	73
Switzerland	56	61	65	70
Austria	45	54	68	67
Denmark	66	61	61	67
Sweden	46	45	56	66
Germany	31	37	45	56
Finland	46	48	58	55
United Kingdom	44	42	55	54
Italy	27	34	49	51
Canada	39	41	47	51
France	27	28	39	46
Australia	35	32	31	27
Japan	20	20	24	26
USA	9	10	15	17

Source: Kym Anderson & Ross Garnaut, *Australian Protectionism: Extent, Causes and Effects*, Allen and Unwin, Sydney, 1987, p.15.

Export Performance Under Labor

The table below shows that after several decades of export stagnation, Australia's export to GDP (I) rose from 14.8 per cent to 20.1 per cent between 1982-83 and 1995-96.

⁴²³ Comprehensive analysis of post-war export growth in industrial nations is provided in Report of the Committee for Review of Export Market Development Assistance, op. cit., pp.5-16. The report notes that Australia was the only industrialised nation that didn't increase its exports to GDP ratio from 1960 to 1989. It remained steady at around 13.5 per cent. Australia's share of world exports fell from 1.7 to 1.1 per cent between 1960 and 1987. Similar analysis is also provided in: Ian Lowe, *Submission to the Parliamentary Inquiry Into Tariffs and Industry Development*, Unpublished, 1992, p.2; and Ralph Evans, ch.1 'The Global Challenge report and the clash of paradigms', op. cit., p.17-19.

Australia's Exports to GDP (I) 1982-83 to 1995-96

Year	Exports to GDP	Year	Exports to GDP
82-83	14.8	89-90	16.4
83-84	14.7	90-91	17.4
84-85	16.3	91-92	17.9
85-86	16.1	92-93	18.8
86-87	16.6	93-94	19.2
87-88	17.2	94-95	18.9
88-89	16.2	95-96	20.1

Source: The figures for the period 1987-88 to 1995-96 are from Australian Bureau of Statistics, *Australian Economic Indicators June 1997*, Cat. no.1350.0, p.21. The figures for the period 1982-83 to 1986-87 are from Australian Bureau of Statistics, *Australian Economic Indicators January/February 1993*, Cat. no.1350.0, p.31.

The table below shows that Australia's export growth averaged 7.0 per cent annually in the 1983 to 1995 period, which was 0.9 percentage points higher annually than the OECD average.

Australia's Growth in Real Exports of Goods and Services by OECD Standards 1983-1995

Nation	83	84	85	86	87	88	89	90	91	92	93	94	95	Total	Ave 83-95
Ireland	10.5	16.6	6.6	2.9	13.7	8.9	10.3	8.6	5.1	13.8	9.2	13.9	13.6	133.7	10.3
Turkey	13.1	25.4	-1.9	-5.1	26.4	18.4	-0.3	2.6	3.7	11	7.7	15.2	6.7	122.9	9.5
Portugal	13.6	11.6	6.7	6.3	10.6	7.9	13.3	10.5	0.5	6.1	-5.1	10.7	11.4	104.1	8.0
Canada	6.4	17.7	6.0	4.5	3.5	9.5	0.8	4.1	1.4	7.6	10.4	14.2	11.8	97.9	7.5
United States	-2.6	8.3	2.7	7.4	11.0	15.9	11.7	8.5	6.3	6.6	3.3	8.3	8.3	95.7	7.4
Spain	10.0	11.7	2.7	1.9	6.3	5.1	3.0	3.2	7.9	7.3	8.5	16.2	9.3	93.1	7.2
Australia	-4.5	16.1	11.0	5.0	11.3	3.2	3.2	8.3	13.0	5.0	7.4	8.5	4.0	91.5	7.0
Greece	8.0	16.9	1.3	14.0	16.0	9.0	4.8	-4.1	3.7	8.7	0.6	7.7	1.8	88.4	6.8
Mexico	13.6	5.7	-4.5	5.6	9.5	5.8	2.3	3.6	4.6	1.7	3.7	7.3	28.4	87.3	6.7
OECD Ave	1.7	9.8	3.8	2.8	6.6	9.8	8.8	7.1	5.3	5.2	2.9	8.2	7.7	79.7	6.1
Italy	2.3	8.5	3.2	2.5	4.7	5.4	8.8	7.0	0.5	5.0	9.4	10.9	11.1	79.3	6.1
Norway	7.6	8.2	6.9	1.6	1.2	5.5	10.7	8.6	6.1	5.2	2.0	8.5	3.7	75.8	5.8
Luxembourg	5.3	18	9.5	3.2	6.5	7.5	6.9	2.6	3.6	1.3	-2.4	5.0	4.4	71.4	5.5
Sweden	9.8	6.8	1.4	3.7	4.3	2.5	3.1	1.6	-2.3	2.3	7.6	14.1	11.4	66.3	5.1
Belgium	2.6	5.5	1.1	5.5	6.5	8.5	7.3	4.1	2.6	3.9	1.6	8.1	8.2	65.5	5.0
Netherlands	3.2	7.5	5.1	1.8	4.0	9.0	6.7	5.3	4.7	2.9	1.6	5.8	6.1	63.7	4.9
New Zealand	7.8	7.4	8.0	-0.1	5.4	4.4	-2.4	6.4	7.1	1.0	6.0	9.6	2.2	62.8	4.8
Japan	4.8	14.8	5.4	-5.7	-0.5	5.9	9.1	6.9	5.4	4.9	1.3	4.5	5.0	61.8	4.8
Finland	2.5	5.4	1.2	1.2	2.7	3.7	1.3	1.4	-6.6	10	16.7	13.3	7.6	60.4	4.6
Germany	-0.8	8.2	7.6	-0.6	0.4	5.5	10.2	11	12.3	-0.3	-4.7	7.5	3.8	60.1	4.6
Austria	3.2	6.1	6.9	-2.7	2.4	9.4	10.7	7.7	5.8	1.2	-1.6	5.2	5.0	59.3	4.6
France	3.7	7.0	1.9	-1.4	3.1	8.1	10.2	5.4	4.1	4.9	-0.4	6.0	5.9	58.5	4.5
UK	1.8	6.5	6.0	4.5	5.8	0.5	4.7	5.0	-0.7	4.0	3.3	9.0	5.7	56.1	4.3
Denmark	4.9	3.5	5.0	0.0	5.1	7.8	4.2	6.9	7.7	1.4	-1.6	7.9	1.0	53.8	4.1
Switzerland	1.1	6.3	8.3	0.4	1.7	5.8	5.0	3.0	-0.7	3.4	1.6	3.3	2.8	42	3.2
Iceland	11.0	2.4	11	5.9	3.3	-3.6	2.9	0.0	-5.8	-1.7	6.7	9.7	-2.4	39.4	3.0

Source: Organisation for Economic Co-operation and Development, *OECD Economic Outlook June 1996*, op. cit., p.A12.

However, Australia's restructuring toward an export economy has also barely begun. *World Competitiveness Yearbook 1996* showed that Australia had the 39th lowest exports to GDP ratio of the 46 nations included in the study. While nations

with large domestic markets like the United States and Japan can achieve national affluence while relying rather heavily on their domestic markets, nations with small domestic markets like Australia must turn to the international market to create national affluence. The table below shows that many of the successful smaller nations have double the percentage of exports to GDP achieved by Australia and a significant group have far more.

Exports to GDP Ratio 1994

Rank	Nation	Exports of Goods and Commercial Services to GDP Ratio 1994	Rank	Nation (Continued)	Exports of Goods and Commercial Services to GDP Ratio 1994
1	Singapore	173.60	24	Portugal	28.93
2	Hong Kong	140.47	25	Philippines	28.89
3	Luxembourg	95.18	26	Chile	27.50
4	Malaysia	92.24	27	China	26.31
5	Belgium	71.72	28	Indonesia	25.86
6	Ireland	68.05	29	United Kingdom	25.75
7	Netherlands	58.23	30	Italy	24.42
8	Czech Republic	45.46	31	France	24.35
9	Taiwan	44.12	32	Poland	23.80
10	Thailand	39.53	33	South Africa	23.43
11	Norway	39.68	34	Germany	23.32
12	Sweden	37.80	35	Spain	22.15
13	Austria	37.36	36	Turkey	21.98
14	Denmark	37.21	37	Russia	20.99
15	Iceland	36.20	38	Greece	19.36
16	Switzerland	36.18	39	Australia	19.01
17	Finland	35.96	40	Mexico	18.40
18	Canada	33.47	41	Colombia	17.03
19	Hungary	33.45	42	USA	9.97
20	Israel	31.43	43	Japan	9.69
21	New Zealand	30.82	44	Brazil	8.76
22	Korea	30.24	45	India	7.38
23	Venezuela	29.98	46	Argentina	6.57

Source: IMD, *World Competitiveness Yearbook 1996*, IMD, Lausanne, Switzerland, 1996, p.386.

3. The Trade Balance, the Current Account and the Net Overseas Debt

There was a major structural increase in the current account deficit during the period of the Hawke and Keating Governments. The current account deficit, which had averaged 1.73 per cent of GDP (I) in the 1970-71 to 1979-80 period,⁴²⁴ averaged 4.4 per cent of GDP (I) in the 1983-84 to 1995-96 period.

⁴²⁴ Australian Bureau of Statistics, *Australian Economic Indicators January/February 1993*, Cat. no.1350.0, p.31.

There was also a massive build up of foreign debt. The net foreign debt rose from \$23.4 billion or 13.6 per cent of GDP (I) in 1982-83⁴²⁵ to \$187.5 billion or 38.4 per cent of GDP (I) in 1995-96.⁴²⁶

Finally, the structural balance on goods and services appears to remain in deficit, with the improvement in the 1990s appearing to largely reflect the recession and then the period of sluggish growth.

Various Measures of Restructuring 1982-83-1995-96 (percentage of GDP (income))

Year	Balance on Goods & Services	Current Account	Net Foreign Debt
1982-83	-2.2	-3.8	13.6
1983-84	-1.3	-3.8	15.3
1984-85	-2.2	-5.0	23.7
1985-86	-3.1	-6.1	31.4
1986-87	-1.8	-4.4	32.6
1987-88	-0.4	-3.4	32.3
1988-89	-1.6	-5.0	34.6
1989-90	-1.7	-5.7	35.6
1990-91	+0.2	-4.0	37.5
1991-92	+0.6	-2.9	39.8
1992-93	-0.3	-3.5	41.8
1993-94	-0.2	-3.8	38.2
1994-95	-1.9	-5.9	39.7
1995-96	-0.1	-4.1	38.4

Source: The figures for the net overseas debt and the current account for the period 1987-88 to 1995-96 are from Australian Bureau of Statistics, *Australian Economic Indicators June 1997*, Cat. no.1350.0, p.21,22. The current account figures for the period 1982-83 to 1986-87 are from Australian Bureau of Statistics, *Australian Economic Indicators January/February 1993*, Cat. no.1350.0, p.31. The net foreign debt figures for the period 1982-83 to 1986-87 are calculated from the original figures for GDP (I) and net foreign debt provided in Australian Bureau of Statistics, *Australian Economic Indicators January/February 1993*, Cat. no.1350.0, p.12,29. The balance on good and services figures are calculated from original GDP (I) and the trade balance figures provided in Australian Bureau of Statistics, *Australian Economic Indicators June 1997*, Cat. no.1350.0, p.7,12; and Australian Bureau of Statistics, *Australian Economic Indicators January/February 1993*, Cat. no.1350.0, p.12,16.

While the restructuring performance according to these measures is poor, the results appear to exaggerate the weakness of Australia's restructuring performance in the period. It is true that the adverse behaviour of market players in responding to financial deregulation may have contributed significantly to the foreign debt. However, much of the decline in these three measures of restructuring may stem from the failure of governments and industrialists to restructure the economy in the decades after 1950. Given that the Hawke and Keating Governments presided over significant restructuring of Australia's export base, it would be unfair to over-emphasise the decline in Australia's economic performance according to these measures. Indeed, some or much of the increase in the current account deficit may have been economically beneficial. It may largely reflect the financing of the private investment necessary to begin the restructuring of the Australian economy.

⁴²⁵ *ibid.*, p.29.

⁴²⁶ Australian Bureau of Statistics, *Australian Economic Indicators June 1997*, Cat. no.1350.0, p.19,22.

4. National Savings

Australia's national savings rate fell from a structural level of approximately 25 per cent of GDP in the three decades to the mid-1970s, to around 20 per cent in the 1980s, and 18 per cent in the 1990s.⁴²⁷ The table below shows that Australia's gross national savings worsened in the period of the Hawke and Keating Governments, from 19.8 per cent in 1983 and a peak of 22.3 per cent in 1988 to 16.9 per cent in 1995. Australia's gross national savings also fell further below the OECD average in the period. Australia's lack of national savings means that it must finance some of its investment by drawing on the savings of other nations, which is reflected in its high current account deficit.

Australia's Gross National Savings as a Percentage of Gross GDP Compared With Other OECD Nations 1983-1995

Nation	83	84	85	86	87	88	89	90	91	92	93	94	95	Ave 83-95
Luxembourg	63.8	63.8	64.1	62.2	55.1	57.8	61.6	62.5	59.4	60.2	n/a	n/a	n/a	61.1
Korea	27.2	29.4	29.2	33.1	37.1	39.2	36.1	35.8	35.9	34.7	35.1	35.2	35.9	34.1
Japan	29.8	30.8	31.7	31.9	32.5	33.4	33.6	33.6	34.5	33.8	32.7	31.3	30.8	32.3
Switzerland	27.9	28.9	29.8	31.1	31.7	32.8	33.7	33.1	31.6	29.7	29.7	29.2	30.1	30.7
Norway	28.3	31.0	29.6	23.0	23.4	22.7	24.6	24.1	23.6	21.0	21.9	n/a	n/a	24.8
Austria	22.6	23.5	23.2	23.8	23.8	24.5	25.2	26.3	26.0	25.3	24.3	25.3	24.9	24.5
Netherlands	22.1	23.5	24.3	24.3	22.6	24.2	26.1	26.0	24.8	23.7	23.4	24.5	24.6	24.2
Portugal	20.5	19.3	21.5	25.4	27.8	26.6	27.3	25.9	22.7	21.4	20.3	20.6	21.6	23.1
Germany	20.1	20.6	20.8	22.4	22.1	22.9	24.3	24.1	22.4	21.9	20.5	21.2	21.4	21.9
OECD	20.7	21.6	21.3	20.8	21.2	21.8	21.8	21.0	20.6	19.6	n/a	n/a	n/a	21.0
Turkey	15.5	16.3	20.7	23.9	24.3	28.9	26.4	21.5	17.7	18.5	18.7	18.9	19.7	20.8
Mexico	28.4	25.7	25.8	19.1	24.5	21.3	20.3	20.3	18.7	16.6	15.1	15.0	19.5	20.8
Spain	19.7	20.9	20.6	21.6	21.6	22.6	21.9	21.7	21.0	19.0	18.9	18.7	21.5	20.7
Finland	22.8	23.8	22.8	22.2	22.1	24.0	24.8	23.0	15.1	12.1	13.0	17.0	19.7	20.2
Italy	22.3	22.2	21.5	21.4	20.9	20.7	20.0	19.5	18.5	17.1	17.9	18.6	20.5	20.1
France	19.1	19.0	18.9	20.1	20.0	21.1	21.8	21.5	21.0	19.8	18.2	19.0	19.7	19.9
Belgium	14.5	15.5	14.9	16.8	17.2	19.5	20.9	21.1	20.6	20.9	21.5	21.7	22.6	19.1
Australia	19.8	19.6	18.7	19.1	20.9	22.3	20.7	17.7	15.5	15.7	16.9	16.7	16.9	18.5
Ireland	15.9	15.8	15.0	14.9	16.3	15.9	16.7	20.1	20.8	18.2	19.1	17.4	19.5	17.4
New Zealand	20.4	19.4	17.1	18.9	17.9	17.8	15.6	14.0	13.7	16.4	18.6	18.3	18.4	17.4
Canada	18.8	20.2	19.6	18.1	19.0	20.6	19.4	16.4	14.3	13.2	13.7	15.4	17.1	17.4
Sweden	16.1	17.9	17.5	18.1	18.2	18.8	19.2	17.7	15.8	13.4	11.9	13.6	16.6	16.5
Denmark	13.4	15.1	14.9	16.1	16.1	16.6	16.9	17.8	17.5	17.7	17.2	16.2	17.6	16.4
United States	17.1	19.0	17.6	16.1	16.1	16.6	16.6	15.6	15.7	14.6	14.9	16.2	15.9	16.3
Iceland	18.3	16.3	14.7	17.4	15.2	15.0	15.0	15.8	14.2	14.3	15.8	17.1	15.8	15.8
Greece	16.8	15.4	13.1	14.5	14.5	17.3	15.9	13.8	15.2	15.3	15.5	15.7	n/a	15.3
UK	17.1	16.8	17.6	16.0	16.0	15.5	15.4	14.4	13.6	12.8	12.5	13.5	13.9	15.0

Source: Organisation for Economic Cooperation and Development, *OECD Economic Outlook June 1997*, Organisation for Economic Co-operation and Development, Paris, 1997, p.30.

⁴²⁷ V.W. Fitzgerald, *National Saving: A Report to the Treasurer*, Australian Government Publishing Service, Canberra, 1993, p.xiii,2,4,5.

5. Economic Growth

The table below shows that Australia's real GDP growth averaged 3.3 per cent annually between 1983 and 1995, which was faster than any other OECD nation in the period bar Ireland, and above the OECD average of 2.7 per cent. While it is important to acknowledge such growth as impressive, it is also important to note that it is only solid in absolute terms, low by Asian standards and insufficient to overcome the mass unemployment experienced in Australia since the mid-1970s. It is also assisted by Australia's immigration program, which brings in a high number of migrants by international standards.

Australia's Real GDP Growth 1983-1995 by OECD Standards

Nation	83	84	85	86	87	88	89	90	91	92	93	94	95	Total Real GDP growth 83-96	Ave Real GDP 83-95 growth
Turkey	5.0	6.7	4.2	7.0	9.5	2.1	0.3	9.3	0.9	6.0	8.0	-5.5	7.3	60.8	4.7
Ireland	-0.2	4.4	3.1	-0.4	4.7	4.3	6.1	7.8	2.2	3.9	3.1	6.4	7.7	53.1	4.1
Luxembourg	3.0	6.2	2.9	4.8	2.9	5.7	6.7	3.2	3.1	1.9	0.0	3.3	3.7	47.4	3.6
Australia	1.0	7.5	4.4	1.8	4.7	4.3	4.2	1.4	-1.6	2.6	4.0	5.2	3.1	42.6	3.3
Norway	4.6	5.7	5.3	4.2	2.0	-0.5	0.3	1.6	2.9	3.4	2.1	5.7	3.7	41.0	3.2
Japan	2.3	3.9	4.4	2.9	4.2	6.2	4.8	5.1	4	1.1	0.1	0.5	0.9	40.4	3.1
United States	4.0	6.8	3.7	3.0	2.9	3.8	3.4	1.3	-1	2.7	2.2	3.5	2.0	38.3	2.9
Canada	3.2	6.3	4.8	3.3	4.2	5.0	2.4	-0.2	-1.8	0.8	2.2	4.6	2.2	37.0	2.8
Spain	2.2	1.5	2.6	3.2	5.6	5.2	4.7	3.7	2.3	0.7	-1.2	2.1	3.0	35.6	2.7
OECD Average	2.6	4.6	3.4	2.8	3.2	4.2	3.6	2.7	0.8	1.8	1.0	2.7	1.9	35.3	2.7
Germany	1.8	2.8	2.0	2.3	1.5	3.7	3.6	5.7	5	2.2	-1.2	2.9	1.9	34.2	2.6
Netherlands	1.7	3.3	3.1	2.8	1.4	2.6	4.7	4.1	2.3	2.0	0.2	2.7	2.4	33.3	2.6
UK	3.7	2.3	3.8	4.3	4.8	5.0	2.2	0.4	-2	-0.5	2.3	3.8	2.4	32.5	2.5
Portugal	-0.2	-1.9	2.8	5.0	5.5	5.8	5.7	4.3	2.1	1.1	-1.2	0.8	2.5	32.3	2.5
Austria	2.0	1.4	2.5	1.2	1.7	4.1	3.8	4.2	2.8	2.0	0.4	3.0	1.8	30.9	2.4
Denmark	2.5	4.4	4.3	3.6	0.3	1.2	0.6	1.4	1.3	0.2	1.5	4.4	2.6	28.3	2.2
Italy	1.0	2.7	2.6	2.9	3.1	4.1	2.9	2.1	1.2	0.7	-1.2	2.2	3.0	27.3	2.1
Iceland	-2.1	4.1	3.3	6.2	8.6	-0.1	0.3	1.1	1.3	-3.3	0.8	3.5	2.0	25.7	2.0
France	0.7	1.3	1.9	2.5	2.3	4.5	4.3	2.5	0.8	1.2	-1.3	2.8	2.2	25.7	2.0
Belgium	0.5	2.2	0.8	1.4	2.0	4.9	3.4	3.4	2.2	1.8	-1.6	2.2	1.9	25.1	1.9
New Zealand	2.4	8.5	1.6	1.0	-0.7	3.9	-1.4	0.1	-3.7	0.3	5.5	4.1	2.2	23.8	1.8
Finland	3.0	3.1	3.3	2.4	4.1	4.9	5.7	0.0	-7.1	-3.6	-1.2	4.4	4.2	23.2	1.8
Greece	0.4	2.8	3.1	1.6	-0.5	4.5	3.8	0.0	3.1	0.4	-1.0	1.5	2.0	21.7	1.7
Switzerland	1.0	1.8	3.7	2.9	2.0	2.9	3.9	2.3	0.0	-0.3	-0.8	1.2	0.7	21.3	1.6
Sweden	1.8	4.0	1.9	2.3	3.1	2.3	2.4	1.4	-1.1	-1.4	-2.2	2.6	3.0	20.1	1.5
Mexico	-4.3	3.6	2.8	-3.8	1.9	1.2	3.3	4.4	3.6	2.8	0.6	3.5	-6.8	12.8	1.0

Source: Organisation for Economic Co-operation and Development, *OECD Economic Outlook June 1996*, op. cit., p.A4. Note: Figures for the Czech Republic not included as figures for the full period not provided, ruling out a calculation of their growth for 1983 to 1995.

6. Employment and Unemployment

Australia's employment growth under Labor was impressive. In yearly averages, almost two million jobs were created between 1982-83 and 1995-96. Australia also achieved the second highest employment growth in the OECD between 1983 and

1995, averaging 1.9 per cent growth per annum, compared to the OECD average of 1.1 per cent per annum. These impressive results should be qualified by two facts. Firstly, nearly half the jobs created were part-time jobs. Secondly, employment growth has slowed rapidly since 1989-90. In yearly averages figures, full-time jobs were less than 70,000 higher in 1995-96 than they were in 1989-90, while total jobs were less than 500,000 higher in 1995-96 than in 1989-90.

The Labour Market 1982-83 to 1995-96 (yearly averages)

Year	Employed part-time	Employed full-time	Total Employed	U/E Rate	Total U/E'd	LFP Rate
1982-83	1,086.3	5,242.7	6,329.0	9.0	624.9	60.6
1983-84	1,105.8	5,281.8	6,387.5	9.6	680.1	60.5
1984-85	1,166.2	5,413.1	6,579.3	8.6	619.4	60.5
1985-86	1,256.4	5,603.6	6,860.0	7.9	591.5	61.4
1986-87	1,355.4	5,688.9	7,044.4	8.3	635.1	62.0
1987-88	1,433.6	5,822.7	7,256.3	7.8	610.5	62.2
1988-89	1,515.4	6,033.3	7,548.7	6.6	534.6	62.6
1989-90	1,639.7	6,192.2	7,832.0	6.2	513.7	63.5
1990-91	1,689.1	6,093.3	7,782.4	8.3	709.0	63.6
1991-92	1,752.2	5,884.6	7,636.7	10.3	881.7	63.0
1992-93	1,796.8	5,837.2	7,633.9	11.0	940.5	62.6
1993-94	1,851.3	5,929.3	7,780.6	10.5	915.5	62.8
1994-95	1,974.1	6,119.0	8,093.1	8.9	794.6	63.3
1995-96	2,039.2	6,260.5	8,299.7	8.5	766.7	63.7

Source: The figures for 1988-89 to 1995-96 are from Australian Bureau of Statistics, *Australian Economic Indicators June 1997*, Cat. no.1350.0, p.62. The figures from 1983-84 to 1987-88 are from Australian Bureau of Statistics, *Australian Economic Indicators January/February 1993*, Cat. no.1350.0, p.90. Note: The figures are original figures and all numbers are thousands.

Australia's Employment Growth 1983-1995 by OECD Standards

Nation	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	Emp growth 83-95	Ave 83-95
Luxembourg	-0.3	0.5	0.9	2.6	2.6	3.1	3.5	4.1	4.1	2.5	1.8	2.5	2.6	30.5	2.3
Australia	-1.8	2.9	3.6	3.5	2.2	3.8	4.7	1.5	-2.1	-0.7	0.3	3.1	4.1	25.1	1.9
Turkey	1.0	1.5	1.7	1.9	2.3	1.5	1.9	2.0	0.3	3.2	0.9	2.5	2.5	23.2	1.8
United States	1.3	4.1	2.0	2.3	2.6	2.3	2.0	1.3	-0.9	0.7	1.5	2.3	1.6	23.1	1.8
Canada	0.6	2.7	3.0	3	2.7	3.2	2.1	0.6	-1.9	-0.6	1.4	2.1	1.6	20.5	1.6
Netherlands	-1.3	0.5	1.3	2.5	1.6	2.3	1.8	3.0	2.6	1.6	0.7	-0.1	1.5	18.0	1.4
Switzerland	0.0	1.0	2.0	2.3	2.5	2.6	2.7	3.2	1.2	-1.6	-0.6	-0.2	0.2	15.3	1.2
OECD	0.5	1.7	1.2	1.5	1.7	2.0	1.9	1.5	0.1	0.1	0.1	0.9	1.0	14.2	1.1
Japan	1.7	0.6	0.7	0.8	1.0	1.7	2.0	2.0	1.9	1.1	0.2	0.1	0.1	13.9	1.1
Iceland	0.9	1.5	3.6	3.1	5.8	-2.8	-1.5	-0.9	-0.4	0.5	-0.3	1.0	1.0	11.5	0.9
New Zealand	-1.0	2.7	3.5	-0.4	0.8	-3.2	-2.6	0.9	-1.4	0.4	2.0	4.2	4.7	10.6	0.8
Greece	1.1	0.4	1.0	0.4	-0.1	1.6	0.4	1.3	-2.3	1.5	0.9	1.9	0.9	9.0	0.7
UK	-0.2	2.3	1.0	0.3	2.4	3.5	2.7	0.4	-3.1	-2.4	0.8	0.7	0.6	9.0	0.7
Portugal	4.0	-0.1	-0.5	0.1	2.6	2.6	2.2	2.2	2.9	-6.4	-2.0	-0.1	1.5	9.0	0.7
Ireland	-2.1	-1.9	-2.0	0.2	1.0	-0.1	1.2	3.3	-0.2	0.4	1.8	3.5	3.0	8.1	0.6
Spain	-1.1	-1.8	-0.9	2.2	3.1	2.9	4.1	2.6	0.2	-1.9	-4.3	-0.9	2.7	6.9	0.5
Norway	0.1	1.3	2.3	3.5	1.9	-0.6	-3.0	-0.9	-1.0	-0.3	0.0	1.5	2.0	6.8	0.5
Austria	-1.2	-0.1	0.2	0.4	0.0	0.6	1.5	1.9	1.9	1.5	-0.3	0.2	-0.4	6.2	0.5
Germany	-1.4	0.2	0.7	1.4	0.7	0.8	1.5	3.0	2.5	-1.8	-1.8	-0.7	-0.2	4.9	0.4
Denmark	0.3	1.7	2.5	2.6	0.9	-0.6	-0.6	-1.0	-1.5	-0.6	-1.0	-0.6	1.8	3.9	0.3
Belgium	-1.0	-0.2	0.6	0.6	0.4	1.5	1.6	1.4	0.1	-0.4	-1.1	-0.7	0.4	3.2	0.2
France	-0.2	-0.9	-0.1	0.5	0.4	1.0	1.4	1.0	0.0	-0.6	-1.4	0.3	1.1	2.5	0.2
Italy	0.1	0.3	0.3	0.4	-0.3	0.5	-0.1	1.2	0.7	-0.9	-2.5	-1.7	-0.6	-2.6	-0.2
Sweden	0.1	0.8	-0.3	0.8	1.0	1.4	1.5	1.0	-1.9	-4.3	-5.8	-0.9	1.6	-5.0	-0.4
Finland	0.6	1.0	1	-0.3	-0.3	0.3	1.6	-0.1	-5.2	-7.1	-6.1	-0.8	2.2	-13.2	-1.0

Source: Organisation for Economic Co-operation and Development, *OECD Economic Outlook June 1996*, op. cit., p.A.23. Notes: The OECD average excludes Mexico prior to 1988. The Czech Republic and Mexico were not included, as figures for the full period were not provided, ruling out a calculation of their employment growth for 1983 to 1995.

Labor's unemployment record was less notable. While unemployment in yearly averages fell from 9.6 per cent in 1983-84 to 6.2 per cent in 1989-90, and, in seasonally adjusted terms, fell to a low of 5.9 per cent in November and December 1989, unemployment rose dramatically in the recession, peaking at 11.4 per cent or 980,000 unemployed people in November 1992.⁴²⁸ When the Labor Government were defeated in March 1996, the unemployment rate was 8.5 per cent.⁴²⁹

Australia's unemployment rate is also high by OECD standards as shown below. In 1983, Australia's rate was 1.6 per cent above the OECD average. In 1995, the last full calendar year of the Labor Government, it remained 0.9 per cent above the OECD average and Australia ranked 15th of 25 OECD nations in unemployment rate performance.

⁴²⁸ Australian Bureau of Statistics, *Australian Economic Indicators January/February 1993*, Cat. no.1350.0, p.90. Monthly figures are seasonally adjusted.

⁴²⁹ Australian Bureau of Statistics, *Labour Force Australia November 1996*, Cat. no.6203.0, p.11.

OECD Unemployment Rates (Commonly-Used Definitions)

Nation	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	Average U/E Rate 83-95
Luxembourg	1.6	1.7	1.7	1.5	1.7	1.5	1.4	1.3	1.3	1.6	2.1	2.7	3.0	1.8
Switzerland	0.9	1.1	0.9	0.7	0.7	0.6	0.5	0.5	1.0	2.5	4.5	4.7	4.2	1.8
Iceland	1.0	1.3	0.9	0.6	0.5	0.6	1.7	1.8	1.5	3.0	4.3	4.7	5.0	2.1
Japan	2.7	2.7	2.6	2.8	2.9	2.5	2.3	2.1	2.1	2.2	2.5	2.9	3.1	2.6
Czech Rep.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.6	3.2	3.0	3.3
Sweden	3.5	3.1	2.9	2.5	2.1	1.7	1.5	1.6	3.0	5.3	8.2	8.0	7.7	3.9
Mexico	6.1	5.6	4.4	4.3	3.9	3.5	2.9	2.7	2.6	2.8	3.4	3.7	6.3	4.0
Norway	3.4	3.2	2.6	2.0	2.1	3.2	4.9	5.2	5.5	5.9	6.0	5.4	4.9	4.2
Austria	3.8	3.9	4.2	4.5	4.9	4.7	4.3	4.7	5.2	5.3	6.1	5.9	5.9	4.9
Portugal	7.8	8.6	8.7	8.6	7.1	5.8	5.1	4.7	4.2	4.1	5.6	6.9	7.2	6.5
New Zealand	5.3	4.5	3.5	4.0	4.1	5.6	7.1	7.8	10.3	10.3	9.5	8.1	6.3	6.6
OECD	8.3	7.8	7.7	7.7	7.3	6.7	6.2	6.0	6.8	7.5	7.9	7.9	7.6	7.3
Netherlands	11.0	10.6	9.2	8.4	8.0	7.8	6.9	6.0	5.5	5.4	6.5	7.6	7.1	7.7
Turkey	7.7	7.6	7.1	7.9	8.3	8.4	8.5	8.0	7.7	8.0	7.7	8.1	7.5	7.9
Germany	7.9	7.9	8.0	7.7	7.6	7.6	6.9	6.2	6.7	7.7	8.9	9.6	9.4	7.9
Greece	7.9	8.1	7.8	7.4	7.4	7.7	7.5	7.0	7.7	8.7	9.7	9.6	10.0	8.2
Australia	9.9	8.9	8.1	8.0	8.0	7.1	6.1	7.0	9.5	10.7	10.9	9.7	8.5	8.6
Finland	5.4	5.2	5.0	5.4	5.1	4.5	3.5	3.5	7.6	13.1	17.9	18.4	17.2	8.6
Small nations average	9.5	9.8	9.6	9.5	9.4	8.3	7.7	7.4	7.8	8.7	9.7	10.0	9.8	9.0
United Kingdom	10.5	10.7	11.0	11.0	9.8	7.8	6.0	5.8	8.2	9.9	10.2	9.2	8.2	9.1
Italy	7.7	8.5	8.6	9.9	10.2	10.5	10.5	9.1	8.6	8.8	10.2	11.3	12.0	9.7
Denmark	10.4	10.1	9.0	7.8	7.8	8.6	9.3	9.6	10.5	11.3	12.3	12.2	10.0	9.9
Canada	11.9	11.3	10.5	9.6	8.8	7.8	7.5	8.1	10.4	11.3	11.2	10.4	9.5	9.9
France	8.3	9.7	10.2	10.4	10.5	10.0	9.4	8.9	9.4	10.3	11.7	12.3	11.6	10.2
Belgium	13.3	13.4	12.4	11.8	11.5	10.4	9.4	8.8	9.4	10.4	12.1	13.1	13.0	11.5
Ireland	14.0	15.5	17.0	17.0	16.8	16.1	14.6	13.2	14.7	15.5	15.6	14.2	12.9	15.2
Spain	18.2	20.1	21.5	21.0	20.5	19.5	17.3	16.3	16.3	18.4	22.7	24.2	22.9	19.9

Source: Organisation for Economic Co-operation and Development *OECD Economic Outlook June 1996*, op. cit., p.A24. Note: OECD average and small nations average excludes Mexico prior to 1988. The figures for the Czech Republic were provided only for 1993 to 1995, but were included because they give some indication of their unemployment rate over the medium-term.

Structural Dislocation and Hysteresis

The Dislocation

A key weakness of rationalist restructuring policies is their tendency to produce substantial structural employment dislocation. This section argues that, contrary to rationalist views, the adjustment process is highly problematic. The dislocation caused is likely to involve much long-term structural unemployment, which in turn, creates negative social and economic consequences.

The evidence in the first three chapters indicates that free market reform of tariffs, infrastructure and general government – while they may have produced some net employment growth – may have also caused gross employment dislocation in the

order of several hundred thousand people over the 1983 to 1996 period. Tariff cuts were one of the causes of the decline in manufacturing employment, which fell from a peak of 1,221.4 million in May 1989 to 1,061.5 million in August 1993, before recovering to 1,113.2 million in November 1995, more than 100,000 below the May 1989 peak.⁴³⁰ The most tariff dependent sectors, particularly TCF and PMV, suffered significant declines in employment. Free market infrastructure reform was a key reason why more than 110,000 people lost their employment in infrastructure firms. Many more jobs have been lost in sectors reliant on subsidised infrastructure provision, as services were removed and prices increased to bring a market return on investment. In turn, negative economic multipliers reduce production in other sectors. Small government policies meant that between February 1984 and February 1996, public sector employment fell by 88,100. Had public sector employment maintained its February 1984 share of total employment, it would have been 563,500 higher at February 1996, all other things being equal.⁴³¹

Easy Adjustment?

Rationalists have tended to believe that resources displaced can be redeployed in more efficient sectors with relative ease, leading to a rapid increase in economic welfare. Part of the explanation for this optimistic view of the adjustment process may be that free trade theory is built on a comparative static model, which involves comparing one point on the production possibility curve with another, after all resources displaced have been redeployed.⁴³² This practice is followed by the IC in their ORANI simulations, which provide projections for the long run, after adjustment is complete, and indeed, after resources have been redeployed in more efficient sectors.⁴³³

In reality, adjustment is much more difficult. Much of the dislocation is likely to be long-term and structural because its incidence is so uneven across industries, regions, sectors, states and occupations. Free market dislocation often causes long-term structural unemployment because it leaves a major oversupply of labour in the particular area of dislocation in question - for example, TCF - in an environment in which the demand for that type of labour is very unlikely to rise. For example, the closure of firms in the 'TCF towns' of Victoria left a major oversupply of TCF workers, who, in the absence of other TCF growth, may have been left structurally unemployed.

The dislocation for industries and sectors was noted above. Among States, tariff cuts had a disproportionately severe impact on Victoria, South Australia and Tasmania, which were also heavily affected by cuts in public sector employment. Furthermore, it appears that reform has permanently removed some of the numbers employed in some occupations, with the least skilled jobs being most particularly affected. Among regional areas, free market policies decimated employment in four policy areas,

⁴³⁰ Australian Bureau of Statistics, *Labour Force Australia 1978-95*, Cat. no.6204.0, p.345-348.

⁴³¹ Australian Bureau of Statistics, *Wage and Salary Earners Australia March Quarter 1997*, Cat. no.6248.0, p.9-11.

⁴³² N. R. Norman, ch.19 'The labour market: An industrial economics approach' in L. R. Webb & R. H. Allen (eds), *Industrial Economics: Australian Studies*, George Allen and Unwin, Sydney, 1982, pp.318-333 at p.324.

⁴³³ Bill Weekes, *op. cit.*, p.179.

namely rationalisation of infrastructure services, tariff cuts, the contraction of the general government sector and the reluctance of governments to implement active industry policies to attract industry to the regions.

Thus, free market reforms are leaving numerous pools of structurally long-term unemployed people in particular sectors, industries, States, regional areas, and occupations. Government ministers such as John Button have acknowledged this structural employment dislocation.⁴³⁴ Ralph Willis said:

[Unemployment] is not just a problem of macroeconomic policies. What I think is not being picked up is the extent to which unemployment is coming out of structural change - microeconomic reform. Most of the microeconomic reform puts people out of jobs in the short term. We all know it's to the national benefit in the long-term, but the immediate impact is usually a decrease in employment. Now once you've got structural change occurring on a whole host of fronts, which we have, then the unemployment effects of that are not insubstantial.⁴³⁵

Rationalist Peter Walsh admitted:

[W]e do not get a smooth transfer of resources out of...[an uncompetitive] industry or the new investment required in some other industry that is more competitive internationally. It may not happen for a long time. It may not happen ever... [I]t does seem to me that Treasury in particular failed to recognise how rheumatic the Australian economy was, or if you like, how much friction there was impeding the transfer of resources.⁴³⁶

Even the IC have acknowledged a large level of structural unemployment:

Even during full employment some people will be out of work when they change jobs or there may be mismatches between the location of job seekers and the jobs on offer. As a consequence there will be some unemployment - often termed the *full employment rate of unemployment*.

Norris (1989) reports that the full employment rate of unemployment was less than 2 per cent in the post-war years up until 1970. There is agreement it has increased to around 7 per cent.⁴³⁷

Paul Keating himself agreed that over half the late 1992 11 per cent unemployment figure involved structural unemployment.⁴³⁸

The table below outlines the major rise in the number of unemployed and long-term unemployed people in the period, as well as the rise in the average duration of unemployment to more than a year. The figures suggest that the period involved massive structural dislocation, with inadequate redeployment of displaced labour.

⁴³⁴ John Kerin, 'Recession not the only cause of job losses: Button', *The Advertiser*, 12 May 1992, p.7.

⁴³⁵ Laura Tingle, 'Micro reform, macro misery: The jobs that are gone forever', *The Weekend Australian*, 15-16 June 1991, p.25,26 at p.25.

⁴³⁶ Peter Walsh, 'Economic rationalism: Economic policies for the nineties' in Stephen King & Peter Lloyd (eds), *op. cit.*, pp.282-290 at p.288.

⁴³⁷ Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 1: Report*, *op. cit.*, p.106.

⁴³⁸ Paul Keating - Interviewed on *Meet the Press* - Aired on Channel 10, 10.50-11.20am on 25 October 1992.

Dislocation in the Rationalist Era

Date	Unemployed People	Unemployed 52-104 weeks	Unemployed more than 104 weeks	Total long-term unemployed	Average Duration of Unemployment (weeks)
Nov 1978	409,500	42,500	21,500	64,000	27.6
Nov 1983	681,200	120,800	81,600	202,400	44.0
Nov 1989	484,800	48,000	68,000	116,100	46.9
Nov 1990	676,800	63,600	68,700	132,400	40.2
Nov 1991	868,000	138,500	94,000	232,600	45.3
Nov 1992	942,000	175,700	158,100	333,800	56.3
Peak	957,600	191,300	190,800	356,200	63.0
	10/93	7/92	9/93	5/93	11/94
Nov 1993	944,000	161,600	190,100	351,300	59.1
Nov 1994	805,400	120,400	163,700	284,100	63.0
Nov 1995	775,500	102,300	129,000	231,300	55.3

Source: Australian Bureau of Statistics, *Labour Force Australia 1978-95*, Cat. no.6204.0, p.22-24,427-429,433-435.
Note: Figures are seasonally adjusted.

The ABS further confirmed the extent of long-term economic exclusion through a longitudinal survey of 875,000 job seekers aged 15 to 59 at May 1995. Of the job seekers, 23 per cent had not found work at the conclusion of the study in September 1997, while a further 16 per cent had found less than six months work. Only 25 per cent had found work for more than 12 months during the period. Meanwhile, only 52 per cent of the job seekers were in employment at the end of the period.⁴³⁹

Why is Adjustment so Difficult?

Numerous social, psychological and economic factors combine to make it very difficult for people who become structurally unemployed to find work again. Rationalists may not recognise these factors because tertiary economics training often ignores the social factors that influence economic behaviour.

The large pool of long-term, structurally unemployed people in Australia face social conditions so inhumane that eventually their existence comes to be largely determined by the material, psychological and social effects of unemployment. The vast majority of the long-term unemployed live in poverty.⁴⁴⁰ Housing security often becomes threatened, and the greater the duration of unemployment, the greater the reduction in housing standard from home-buying to renting houses to renting flats to renting a bed-sitting room to caravans. At the worst end of the spectrum, unemployment related poverty can lead to homelessness, with people living out of rubbish bins, sleeping in parks and alley ways, and breaking into homes.⁴⁴¹ The

⁴³⁹ Australian Bureau of Statistics, *Australians' Employment and Unemployment Patterns 1994-1997*, Cat. no.6286.0, p.5.

⁴⁴⁰ Joan Vipard, Bruce Bradbury & Diane Encel, Social Welfare Research Centre, 'Unemployment and poverty: measures of association', *Australian Bulletin of Labour*, vol.13, no.3, June 1987, pp.179-192 at p.180,183,188-190.

⁴⁴¹ Graeme Brewer, *Out of Work, Out of Sight: Study of the Impact of Unemployment on a Group of Australian People*, The Brotherhood of St Laurence, Fitzroy, Victoria, 1980, p.35,36,39,41-44.

Australian Institute of Health and Welfare report, *Australia's Welfare 1995*, estimated that there were at least 61,000 homeless people in Australia.⁴⁴²

At this time of fairly extreme material deprivation, unemployed people must also cope with the stigma associated with unemployment. Many people are suspicious about the motivation of unemployed people to find work and resent their receipt of benefits, even though they leave people short of the poverty line.⁴⁴³ Even family and friends sometimes treat unemployed people with suspicion about their motivation and adequacy, which sometimes leads to them ceasing contact.⁴⁴⁴ Numerous studies suggest that this stigma is a major cause of some of unemployment's most damaging social and psychological consequences.⁴⁴⁵ One of the unemployed in Brewer's study remarked:

At one stage I wanted to commit suicide. I couldn't handle it - people pressuring me, calling me a bludger,... When you're unemployed you've got a stamp and you just can't get rid of it. It's like a disease that grows all over your body until you just die... You think suicide is your only hope.⁴⁴⁶

The psychological effect of prolonged unemployment is generally devastating and normally involves major changes to a person's identity.⁴⁴⁷ Studies show that the key cause of psychological deterioration was poverty and that, as economic resources wore thin, people go through four stages from 'unbroken' to 'resigned' to 'in despair' to 'apathetic'.⁴⁴⁸

In some cases, prolonged unemployment can leave people psychologically dysfunctional. For example, studies show that increased unemployment leads to sharp increases in mental hospital admission rates⁴⁴⁹ and other studies have shown that the experience of prolonged unemployment can help to cause psychiatric disorders.⁴⁵⁰

The loss of one's work role can be devastating because people's identity, public image, status and life-style are often closely tied to work roles.⁴⁵¹ Joblessness also entails removal from a previously stable system of job related friendships, relationships and patterns of behaviour. Unemployed people must cope with

⁴⁴² Australian Institute of Health and Welfare, *Australia's Welfare 1995: Services and Assistance*, Australian Government Publishing Service, Canberra, 1995, p.50.

⁴⁴³ Graeme Brewer, op. cit., p.88; and Peter Kelvin & Joanna E. Jarrett, op. cit., p.95,118.

⁴⁴⁴ Graeme Brewer, op. cit., p.71.

⁴⁴⁵ Peter Kelvin & Joanna E. Jarrett, op. cit., p.118-124.

⁴⁴⁶ Graeme Brewer, op. cit., p.54.

⁴⁴⁷ Graeme Brewer, op. cit., p.56.

⁴⁴⁸ Peter Kelvin & Joanna E. Jarrett, op. cit., p.18-22 detail a range of studies showing that prolonged unemployment produces psychological decline through such stages.

⁴⁴⁹ Keith Windshuttle, *Unemployment: A Social and Political Analysis of the Economic Crisis in Australia*, rev. edn, Penguin Books, Ringwood, Victoria, 1980, p.95; and N. Whiteside, 'Social consequences of unemployment: The question of health', *Bulletin of Labour Market Research*, no.16, 1985, p.10.

⁴⁵⁰ Daryl Dixon, op. cit., p.17; and Linda L. Viney, ch.9 'The psychological and social effects of unemployment' in Robert Castle & John Morgan (eds), *Australian Studies: Unemployment in the Eighties*, Longman Cheshire, Melbourne, 1984, pp.134-144 at p.134,142.

⁴⁵¹ Graeme Brewer, op. cit., p.48,49; and Keith Windshuttle, op. cit., p.113.

isolation and the loss of their functional role within society. Job loss can be particularly difficult for those strongly socialised to taking a 'breadwinner' role, who feel they've failed.⁴⁵²

Another major factor in explaining the psychological effects of prolonged unemployment is the decline in social and communal activity.⁴⁵³ Unemployed people tend to withdraw from their friendships because of the stigma associated with unemployment, financial embarrassment due to not being able to afford social activity,⁴⁵⁴ insecurity and loss of confidence,⁴⁵⁵ loss of job related friendships,⁴⁵⁶ the sheer, progressively exhausting effort needed to keep going at all, and the unemployed individual's frequent debilitating dislike of themselves.⁴⁵⁷

Thus, the difficult social world of unemployment often leads to major psychological deterioration, with commonly felt feelings including fatalism, apathy, anger, alienation,⁴⁵⁸ humiliation, loss of control over one's life,⁴⁵⁹ boredom, rejection, embarrassment, worthlessness and depression.⁴⁶⁰

What then, are some of the social consequences of prolonged unemployment, apart from those mentioned above such as poverty, impaired housing security and psychological deterioration?

Studies indicate that there is a correlation between prolonged unemployment and divorce and family breakdown,⁴⁶¹ violence, child abuse⁴⁶² and wife battering.⁴⁶³ There were almost 47,000 reported cases of child abuse in 1990-91.⁴⁶⁴

As many studies have confirmed, prolonged unemployment is a major factor in many suicides.⁴⁶⁵ In 1991, the heart of the recession, there were 2,380 suicides, and

⁴⁵² Peter Kelvin & Joanna E. Jarrett, op. cit., p.55-60,67,68,72,79,80.

⁴⁵³ *ibid.*, p.70.

⁴⁵⁴ Graeme Brewer, op. cit., p.71,72.

⁴⁵⁵ Keith Windshuttle, op. cit., p.114.

⁴⁵⁶ Lorna McKee & Colin Bell, ch.9 'His unemployment, her problem: The domestic and marital consequences of male unemployment' in Sheila Allen, Alan Waten, Kate Purcell & Stephen Woods, (eds), *The Experience of Unemployment*, MacMillan, Basingstoke, Great Britain, 1986, pp.134-149 at p.143.

⁴⁵⁷ Peter Kelvin & Joanna E. Jarrett, op. cit., p.54,81,114.

⁴⁵⁸ Linda L. Viney, ch.9 'The psychological and social effects of unemployment' in Robert Castle & John Morgan (eds), *Australian Studies: Unemployment in the Eighties*, Longman Cheshire, Melbourne, 1984, pp.134-144 at p.135.

⁴⁵⁹ Peter Kelvin & Joanna E. Jarrett, op. cit., p.135.

⁴⁶⁰ *ibid.*, p.52,53.

⁴⁶¹ Keith Windshuttle, op. cit., p.76,79; and Philippa Smith, op. cit., p.126.

⁴⁶² Philippa Smith, op. cit., p.126.

⁴⁶³ Keith Windshuttle, op. cit., p.82,83.

⁴⁶⁴ Australian Institute of Health and Welfare, *Australia's Welfare 1993: Services and Assistance*, Australian Government Publishing Service, Canberra, 1993, p.183.

⁴⁶⁵ Keith Windshuttle, op. cit., p.106-110; Philippa Smith, op. cit., p.125; Stephen Platt, ch.10 'Recent trends in parasuicide and unemployment among men in Edinburgh' in Sheila Allen, Alan Watch, Kate Purcell & Stephen Woods (eds), op. cit., pp.150-166.

this marked the first time since the Great Depression that suicide numbers had exceeded the road toll.⁴⁶⁶

Increased unemployment has also been shown to correlate with increased physical ill health, both for the unemployed and their family. At best, this includes diminished physical tone, body image, appearance, fitness and posture.⁴⁶⁷ Worse is the correlation between unemployment and increased heart disease, ulcers, overall health rates,⁴⁶⁸ hospitalisation⁴⁶⁹ and death.⁴⁷⁰

There is also a correlation between prolonged unemployment and crime.⁴⁷¹ Dunstan tested many of traditional theories on the causes of crime, including income, education and social status, and found that the variable most significantly related to crime was unemployment.⁴⁷²

Long-term unemployment can also produce more specific employment related disadvantages. It can lead to skill atrophy, discouragement of active work search, loss of contact with a network of workmates who can provide informal information of job vacancies and, most particularly, employer stigmatisation.⁴⁷³ Employers often discount the value of long-term unemployed people, preferring to employ school and tertiary-trained entrants to the labour market.⁴⁷⁴

Studies confirm that people in long-term unemployment struggle to gain employment. Between 1983 and 1990, when almost 1.6 million jobs were created, the numbers of long-term unemployed fell only 90,000 and the number of those unemployed for two years or more fell only 30,000. For every seven jobs created in the period, only one job went to an unemployed person.⁴⁷⁵ The Green Paper on Employment found that a person unemployed for less than three months has more than four times the chance of gaining employment than someone unemployed for two years or more.⁴⁷⁶

Thus, the rationalist view that 'resources released' can be readily redeployed may be unrealistic. People in very difficult economic and social circumstances struggle to cope and can not readily become the building blocks of a restructured economy.

⁴⁶⁶ Australian Bureau of Statistics, *Causes of Death Australia 1991*, Cat. no.3303.0, p.2,8.

⁴⁶⁷ Peter Kelvin & Joanna E. Jarrett, op. cit., p.68,74,75,79.

⁴⁶⁸ Philippa Smith, op. cit., p.125.

⁴⁶⁹ Linda L. Viney, op. cit., p.134.

⁴⁷⁰ Caucus Task Force, op. cit., p.22.

⁴⁷¹ Daryl Dixon, op. cit., p.17.

⁴⁷² Philippa Smith, op. cit., p.126.

⁴⁷³ P.N. Junankar & Cezary A. Kapuscinski, 'The incidence of long-term unemployment in Australia', op. cit., p.327.

⁴⁷⁴ Committee on Employment Opportunities, *Restoring Full Employment: A Discussion Paper*, Australian Government Publishing Service, Canberra, 1993, p.24.

⁴⁷⁵ Caucus Task Force, op. cit., p.14-16.

⁴⁷⁶ Committee on Employment Opportunities, op. cit., p.24.

Structural Dislocation in Regions

The dislocation caused by free market policies to regions is proportionally more disruptive because regional centres and country towns often have narrow industry bases. Negative multipliers are substantial where a sector takes up a large proportion of a region's output, while a narrow industry base means there are often few alternative opportunities for those displaced.⁴⁷⁷ In a context of high unemployment, slow or negative growth, the continuing decline of the rural sector and low labour mobility, free market policies are creating much long-term structural unemployment in regional Australia.

Rationalists have tended to overlook regional adjustment problems because, as noted above, they tend to assume that resources released are readily redeployed. Such adjustment in regions is dependent on high labour mobility.⁴⁷⁸ Unfortunately, dislocation caused in regions often produces pools of long-term structural unemployment because many people are unwilling to move from regions in structural decline to regions experiencing sound employment growth.

Numerous submissions from the regions to the IC's *Impediments to Regional Industry Adjustment* inquiry stated that a lack of labour mobility, in the context of dislocation, had left large pools of long-term structural unemployment and very high unemployment rates.⁴⁷⁹ This was also a key conclusion reached by the *Independent Parliamentary Inquiry Into Tariffs and Industry Development*⁴⁸⁰ and numerous submissions thereto.⁴⁸¹ The general consensus among regional submissions was summed up by the Bendigo branch of the Australian Chamber of Manufactures:

The Industry Commission Issues Paper talks coldly about labour mobility when in fact most labour is not mobile. The available people remain when an industry closes, and become social welfare recipients probably being retrained for non-existent employment and with no real prospect of future employment.⁴⁸²

A BIE study of adjustment shocks in six regional areas found that 80 per cent of those displaced refused to move to improve their employment prospects, a trend for which the IC found support in their regional visits as part of their regional adjustment inquiry.⁴⁸³ The IC itself noted a range of studies showing low labour mobility

⁴⁷⁷ Australian Chamber of Manufactures, Bendigo, *Submission to the Independent Inquiry Into Tariffs and Industry Development*, p.1. [The second page 1]

⁴⁷⁸ N. R. Norman, op. cit., p.324.

⁴⁷⁹ Australian Chamber of Manufactures, Bendigo, op. cit., p.2,3; Maryborough & District Development Committee, op. cit., p.2; Riverland Development Corporation, op. cit., p.5,6; Kojonup Shire Council, *Submission to the Industry Commission Inquiry Into Impediments to Regional Industry Adjustment*, Unpublished, 1992, p.2; and Brotherhood of St Laurence, *Impediments to Regional Industry Adjustment: Submission to the Industry Commission*, Unpublished, 1993, p.2.

⁴⁸⁰ *Independent Parliamentary Inquiry Into Tariffs and Industry Development*, op. cit., p.14.

⁴⁸¹ For example, City of Maryborough per Peter R Marshall, op. cit., p.1,2.

⁴⁸² Australian Chamber of Manufactures, Bendigo, op. cit., p.2.

⁴⁸³ Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 1: Report*, op. cit., p.83,84.

between States, on a regional basis, between industries, and even on a sub-State level, meaning disequilibrium in regional unemployment rates persist.⁴⁸⁴

So exactly how long does adjustment take, especially for the most depressed areas? Andrews and Karmel produced findings based on the average response of regions in the 1985-1991 period. They estimated that, for regions that experienced an employment shock that increased their unemployment rate 5 per cent relative to the national average rate, it would take 40 years before the rate returned to the national average. In the period of rapid employment growth between 1984 and 1990, the standard deviation in unemployment between regions fell only slightly, from 3.9 to 3.3 percentage points. The study showed that, of the 291 regions in the worst third of regional unemployment rates in 1984, 67 per cent remained there in 1991.⁴⁸⁵ Thus, where free market policies produce significant dislocation for regions, the dislocation can persist for decades, particularly given the other factors impeding employment growth in regions, such as periodic recession and the decline in agriculture.

There are numerous reasons why labour is immobile across regions. People are often reluctant to leave an area they perceive as their home, where they have family ties, friendships and an established lifestyle.⁴⁸⁶ People often have long-term commitments in the local area, like home mortgages and children in education. One's spouse may already have attractive employment.⁴⁸⁷ People also have less information about employment and accommodation in other regions, and may not be able to draw on their network of friends and relatives, nor direct contact with employers, to gain employment.⁴⁸⁸

The impact of regional decline on housing values can reduce mobility. Funds gained from selling a home in a region in decline may be significantly less than the cost of buying a comparable home in an expanding area. Major transaction costs associated with buying new homes also discourages labour mobility, as does a range of resettlement costs.⁴⁸⁹

In short, a person's location is generally determined by factors other than employment. ABS figures and recent studies indicate that employment concerns influence only about 14 per cent of the combined interstate and intrastate movement. Numerous other factors, including housing, finance, changes in marital status, retirement and health were given as the key factor why people had moved.⁴⁹⁰ Thus,

⁴⁸⁴ Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 2: Appendices*, op. cit., p.D1,D13,D15.

⁴⁸⁵ Les Andrews & Tom Karmel, *Regional Labour Markets: Dynamic Aspects of Unemployment*, Unpublished, 1993, p.3,8,9.

⁴⁸⁶ Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 1: Report*, op. cit., p.79,80.

⁴⁸⁷ Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 1: Report*, op. cit., p.79,80; and Ross Clare & Neil Ferry, 'Review of regional trends and patterns' in Economic Planning Advisory Council, *Regional Policies: Future Directions: Papers Presented at the Office of EPAC Seminar*, Australian Government Publishing Service, Canberra, 1990, pp.9-24 at p.14.

⁴⁸⁸ Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 1: Report*, op. cit., p.81,219,220.

⁴⁸⁹ *ibid.*, p.84-90,93,95,96.

⁴⁹⁰ *ibid.*, p.81.

where free market restructuring produces significant dislocation for a region, it often creates a major pool of long-term structurally unemployed people, as those displaced are often unable or unwilling to move to regions experiencing employment growth.

The Economic Implications of Significant Structural Dislocation

In addition to producing major social upheaval, dislocation entails economic costs. Rationalist organisations such as the Treasury and the IC generally assume that displacement has no consequences for unemployment beyond the short-term.⁴⁹¹ Unfortunately, by creating major pools of long-term unemployment in regions, sectors, occupations and industries, free market policies have made a gross contribution to increasing hysteresis and the long run unemployment rate.

An increasing body of empirical and theoretical research shows that short-term increases in unemployment tend to raise the long run level of unemployment and lower national income.⁴⁹² Rising long-term unemployment increases the mis-match between the available jobs and the skills of the unemployed. This results in wage pressures and skill shortages emerging early in recovery phases, which limits growth. The greater the proportion of long-term unemployed, the slower vacancies will be filled, leaving lower tax, income and output, and a higher 'natural' rate of unemployment. The Green Paper on Employment noted studies which indicated that the increase in the unemployment rate attributable to higher long-term unemployment in the mid-1980s was in the range of 0.75 to 1.25 per cent.⁴⁹³

Of course, the production lost as a result of creating unemployment also has significant implications for economic growth and living standards. Further, long-term unemployment can lead to skills atrophy, which reduces national competitiveness by reducing the national skills base.⁴⁹⁴

Rising unemployment also produces reduced government revenue and rising outlays, which can reduce economic welfare by requiring greater taxation or reduced public investment. Upon becoming unemployed, people generally no longer contribute to tax revenues, and produce higher government outlays through their need for income support. In addition, unemployed people may become eligible for a range of income tested benefits such as rental supplements, Austudy and child care fee relief. Unemployment is also associated with many social problems, such as psychological dysfunction, crime, ill health, suicide, domestic violence, child abuse and family breakdown. Rising unemployment therefore leads to higher spending in areas such as health care, correctional services and emergency support.⁴⁹⁵ Finally, the build up of very high unemployment and much long-term structural unemployment has necessitated significant expenditure on labour market programs. The Commonwealth's labour market expenditure averaged around \$600 million from

⁴⁹¹ Matthew Doman, 'Spectre of "jobless recovery"', *The Australian Financial Review*, 1 September 1993, p.19.

⁴⁹² John Quiggan, op. cit., p.82.

⁴⁹³ Committee on Employment Opportunities, op. cit., p.35,36,126.

⁴⁹⁴ Caucus Task Force, op. cit., p.18.

⁴⁹⁵ Daryl Dixon, op. cit., p.13-19.

1983 to 1991,⁴⁹⁶ and this rose to \$1.133 billion in 1992-93.⁴⁹⁷ In *Working Nation*, Labor committed itself to increasing labour market expenditure to \$2.2 billion in 1995-96 and to \$2.4 billion in 1996-97.⁴⁹⁸

Junankar and Kapuscinski estimated that in 1992, the revenue and expenditure loss of a one per cent increase in unemployment was \$3-6 billion annually.⁴⁹⁹ Thus, free market policies, which generally produce significant structural dislocation over the short to medium-term, are likely to have produced significant annual costs to government in the adjustment phase.

Free Market Dislocation Regardless of Economic Context

A final key weakness of rationalist policy in the period was that it was implemented as if universally applicable. In particular, too little consideration was given to the net impact on employment of free market policies, in combination with the impact of the state of the economic cycle and the remainder of the Government's policy agenda.⁵⁰⁰ Rationalist restructuring is most effective in a context of strong economic growth, with supporting policies to encourage the redeployment of displaced resources.

Specifically, the Hawke-Keating Governments, in the period from 1990 to 1992, reduced employment through free market reform of tariffs, infrastructure and the general government sector, while other policies and the economic recession were also creating significant displacement. This approach ensured that many of those who lost their jobs, experienced long-term structural unemployment, thereby creating significant economic and social costs.

Free market reforms were implemented while numerous other factors contributed to unemployment.

Firstly, 'boom-bust' macroeconomic policies were implemented. The Government's first mistake was in not further mitigating the late 1980s boom, which sowed the seeds of the later contraction. Monetary policy needed to have been tighter in the 1987 to mid-1988 period and contracted earlier than May 1988. Fiscal policy was also too loose throughout this period, especially due to the \$5 billion tax cut on 12 April 1989, given that it impacted in a booming economy.⁵⁰¹

The Labor Government then mishandled the boom. History has shown that the combination of an excessive boom, and the late application of restraint in macroeconomic policy, is a recipe for a major subsequent contraction. Operating in

⁴⁹⁶ Australian Council of Trade Unions, *A Program Towards Full Employment*, op. cit., p.65.

⁴⁹⁷ Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 1: Report*, op. cit., p.224,225,227,229,230.

⁴⁹⁸ *Working Nation: Policies and Programs*, op. cit., p.109.

⁴⁹⁹ This was from a forthcoming Office of EPAC Background Paper by Junankar and Kapuscinski 'The Costs of Unemployment in Australia', Australian Government Publishing Service, Canberra, 1992, as cited in Economic Planning Advisory Council, *Regional Policies: Future Directions*, op. cit., p.15,16.

⁵⁰⁰ John Quiggin, op. cit., p.63 writes: 'The IC has been particularly strong in its support for the view that microeconomic reform should proceed as rapidly as possible, regardless of any associated job losses and regardless of the state of the national economy.'

⁵⁰¹ Paul Kelly, op. cit., ch.19 'The 1980s boom' pp.361-385.

this context, the tight monetary policy, involving an increase in cash interest rates from 11 to 18.5 per cent over the 21 months from April-May 1988,⁵⁰² was an excessive response, which constituted a major partial cause of the 1990-91 recession, as Keating has admitted.⁵⁰³ The stance of monetary policy failed to shift from contraction until January 1990, which was roughly the point that the economy began to contract. Given that the main effect of monetary policy shifts do not impact on the economy for 12-18 months, the Government's late application of very tight monetary policy had its main impact during the worst of the recession. The inadvisability of this policy was also compounded by the high level of debt in the economy, which fostered widespread bankruptcies when the economy slowed.⁵⁰⁴ As Labor Senator Peter Walsh stated:

We ultimately implemented a policy with interest rates running at around 20 per cent for 12 to 18 months... [I]f you hold interest rates at that level for that time I would have thought it was highly predictable that there would be a fairly serious recession.⁵⁰⁵

Various studies of the causes of the recession have stated that monetary policy was its key cause. For example, the NIEIR found that real interest rates were responsible for 2.2 of the 3.9 per cent deviation from trend growth over the recession period.⁵⁰⁶

Secondly, the economic context in this period was domestic recession initially, followed by a slow recovery.

Thirdly, a major world recession was emerging, which acted to slow Australia's recovery from 1992.

Fourthly, there was a fall in the terms of trade associated with the world economic downturn.

Fifthly, the fallout from financial deregulation was impacting in the 1990-1992 period. Financial deregulation brought rapid credit growth to finance highly geared investments. Too much of this investment was in speculative, rather than productive activities. Asset prices boomed in the mid-1980s, before falling equally dramatically, leaving widespread bankruptcies and low investment.⁵⁰⁷

⁵⁰² *ibid.*, p.377.

⁵⁰³ Keating admitted that interest rates were held too high for too long as Prime Minister in Paul Keating, *Speech at the National Press Club* - Aired on ABC-TV, 1-2pm, 11 March 1993. Don Greenlees, 'We never got credit we deserved: PM', *The Weekend Australian*, 6-7 August 1992, p.4, using information from the interviews with Paul Chubb from the 'Labor in Power' television series, noted that Keating claimed he wanted interest rates to rise in February 1988, but the Reserve Bank delayed tightening until May, and also claimed he wanted interest rates cut much earlier and faster throughout 1990, but the Reserve Bank moved too slowly, despite the imminent downturn.

⁵⁰⁴ Access Economics, *The Origins of High Unemployment*, *op. cit.*, p.63.

⁵⁰⁵ Paul Kelly, *op. cit.*, p.495.

⁵⁰⁶ National Institute of Economic and Industry Research, *The First Order Causes of the 1990-91 Recession: Structural Change in the Australian Economy: A Report for EPAC prepared by the National Institute of Economic and Industry Research in Economic Planning Advisory Council, Origins of the 1990-91 Recession in Australia*, *op. cit.*, pp.1-49 at p.33. Access Economics, *The Origins of High Unemployment*, *op. cit.*, p.60-62 concluded monetary policy was responsible for 0.9 of the 2.9 per cent deviation from the baseline employment growth path.

⁵⁰⁷ Access Economics, *The Origins of High Unemployment*, *op. cit.*, p.63.

Sixthly, import growth was strong in the period despite the recession, which meant displaced local production and jobs.

Seventhly, labour supply was unusually strong by comparisons with the levels usually associated with recession, leading to larger than usual unemployment over the period. Access Economics argued that the different labour supply behaviour in the 1990-91 recession, compared with previous recessions, accounted for 0.7 of the 2.9 per cent deviation in the unemployment rate from historical trends over the recession period.⁵⁰⁸

Eighthly, real wages rose by six per cent in the three years from the third quarter 1988. The Access Economics study estimated that this accounted for 0.5 of the 2.9 per cent deviation in unemployment in the recession period.⁵⁰⁹

Ninthly, unemployment levels were very high, peaking at more than 11 per cent.

Finally, Australia's exchange rate was overvalued by the financial markets throughout the post-deregulation 1980s, up until 1992. A promised benefit of financial deregulation was that it would help keep the current account in approximate balance, as any deterioration would lead to a lower dollar, which, in turn, would increase the competitiveness of Australian exports and remedy any disequilibrium. While there was a significant response after financial deregulation, the dollar has not depreciated sufficiently to prevent continuous, significant current account deficits over the 15 years since the float of the Australian dollar.

Thus, free market policies had been implemented as if universally applicable and regardless of the economic context. The result of this combination of factors could only ever have been a major recession and significant dislocation. Between January 1990 and December 1992, in seasonally adjusted terms, the unemployment rate increased from 6.1 per cent to 11.2 per cent, employment fell by more than 230,000 and long-term unemployment increased from 115,800 to 342,100.⁵¹⁰

This major labour market deterioration, by creating a large pool of structurally unemployed people, increased hysteresis and the long run unemployment rate. This criticism of rationalism is even more substantial when one imagines the dislocation that would have been caused by implementation of the more hardline rationalist recommendations made in the period, such as Treasury's 1988 submission recommending the complete removal of tariffs within five years.⁵¹¹

The lesson for policy from this period of dislocation is that free market policies, because they tend to produce significant dislocation, are best implemented when the economy is growing, and in conjunction with policies that focus on creating growth, so that resources released can be redeployed in new firms and sectors. A policy framework to produce growth and restructuring is outlined in part two.

⁵⁰⁸ *ibid.*, p.60.

⁵⁰⁹ *ibid.*, p.61,65,66.

⁵¹⁰ Australian Bureau of Statistics, *Labour Force Australia 1978-95*, *op. cit.*, p.24,435.

⁵¹¹ Randall G. Stewart, *op. cit.*, p.113.

Conclusion

The evidence in this chapter suggests three major conclusions on restructuring and employment growth in the period.

Firstly, the failure to restructure the economy in the decades after 1950 was a major lost opportunity and impeded economic performance under the Hawke-Keating Labor Governments.

Secondly, rationalist policies - aside from causing significant dislocation - are likely to have had a moderately positive net effect on restructuring and employment growth. After decades of very slow structural change, Australia reversed the long run decline in its exports to GDP ratio, continued more vigorously the reduction in its commodity reliance, hastened the decline of low wage manufactures, began the rapid growth of ETM exports, and sped the rise of services in total exports. Solid economic and employment growth was also achieved in the period. In addition, it could be argued that the high external deficits of the period largely reflect an economy making the investments necessary to underwrite future restructuring, while the high unemployment of the period reflects an economy producing significant structural adjustment.

However, rationalist policies appear to have had only a moderate impact in fostering restructuring and employment growth, rather than a radical impact. Indeed, some measures indicated that the effects of the policies were decidedly mixed. For example, Australia's trade account, current account, net foreign debt and national savings record was very poor in the period. Further, while economic and employment growth were high by OECD standards, they were only solid in absolute terms, low by Asian standards and insufficient to make major inroads into unemployment. In addition, the improvements in Australia's export structure were all fostered by strong world trade growth trends, and in most sectors, merely continued long run Australian trends in export growth, if at a faster pace.

The third major conclusion is that much of the task of restructuring the economy, driving employment growth and achieving national competitive advantage remains to be achieved. Australia remains far too dependent on commodities. ETMs are still only around 20 per cent of exports, despite being a majority of world exports, while nearly 75 per cent of merchandise imports are ETMs. The vast potential to increase service exports remains largely untapped. With this export structure, any growth of above four per cent will bring an unsustainable increase in the current account deficit. Lagging living standards and mass unemployment will continue unless Australia can rapidly restructure its export base to ETMs and sophisticated services.

Finally, the chapter argued that the free market restructuring gains came at the cost of significant structural dislocation, which produced negative social and economic consequences during this 'transition phase'. In particular, the social and psychological impact on the people affected is likely to have been severe, many regions face very long periods of high unemployment and decline, and long run economic and employment growth may have been affected. Free market reforms are best implemented during periods of economic growth, and in conjunction with

policies aimed to create solid growth, so that many of those displaced can be quickly redeployed.

Part Two: Economic Rationalism - The Key to National Competitive Advantage, Restructuring and Employment Growth?

In part two, an examination is made of why rationalist policies have not produced more substantial improvements in national competitiveness, restructuring and employment growth.

In chapter five, the overall rationalist approach to economic policymaking is examined. It is argued that, in the Labor years, rationalist dominated institutions became extreme, almost automatically prescribing market policies in a range of policy areas. It is argued that this view is based on a false conception of a 'pure' market, which rationalists invariably assume produces optimal economic outcomes. This conception is argued to be not just empirically false, but also dangerous, because private sector growth has always been crucially dependent on a range of support structures provided by government. The rationalist 'no industry policy' prescription therefore can impede the creation of economic prosperity by failing to build capacity in a range of crucial areas subject to market failure.

The remainder of the thesis argues that the key weakness of this rationalist approach - and the key reason rationalism fails to substantially propel national competitiveness, restructuring and employment growth - is that it fails to foster the creation of an innovation-driven economy. For this argument to have validity, two propositions must be evidenced.

Firstly, it must be demonstrated that innovation is the key to national competitive advantage, restructuring and employment growth. This is the key task of chapter six.

Secondly, it must be demonstrated that the rationalist paradigm can not produce an innovation-driven economy. This is the key task of chapters seven to 14. In these chapters, it is argued that establishing competitive advantage on the basis of innovation requires that the nation build up excellence in a range of innovative activities, which include R&D, technology diffusion, work organisation, industrial financing, education and training, management and export marketing. Together, such capabilities comprise an 'innovation chain' because each is crucial to achieving competitive advantage through innovation. Market failure and Australian weaknesses in each of these areas explains why Australia has failed to establish an innovation-driven economy. Rationalism, because it remains extremely reluctant to acknowledge market failures and rules out active industry policy, can not build excellence in these capabilities. Strategic industry policies that could help Australia to achieve excellence in each part of the 'innovation chain' - and thereby bring national competitive advantage, successful restructuring and economic and employment growth - are outlined.

Of course, factors other than innovation are important to fostering national competitiveness and the appropriate mix of public and private activity needs to be actively explored in a range of policy areas. However, this thesis focuses on

innovation because it is the most important factor in creating national competitive advantage, and the most important factor explaining the limited economic success of the rationalist paradigm.

It should be noted that conclusions to chapters five to seven are foregone due to their brevity. Further, chapter seven outlines the key arguments and the structure for chapters eight to 14. For this reason, conclusions to these remaining chapters are also foregone to avoid repetition. Key conclusions from part two are discussed in the conclusion to the thesis.

Chapter Five: The Rationalist Paradigm and Strategic Industry Policy

Introduction

In this chapter, a critique is made of the rationalist approach to economic policymaking in the 1983 to 1996 period. It is argued that rationalists tended to place overwhelming faith in the capacity of markets – virtually alone – to bring sound economic outcomes. It is argued that this view can impede economic development because private sector growth has always been crucially dependent on government investment and government support structures.

No Industry Policy!

Modern Australian rationalism generally assumes that a market allocation of resources maximises efficiency and growth, and that industry policy invariably reduces growth. Rationalists have applied this view in each area of industry policy with unyielding rigour. Indeed, it is this reductionism, theoretical neatness and seeming capacity to solve economic problems with simple maxims that is so attractive to rationalists.⁵¹²

Rationalism stands in great contrast to a long and continuing tradition of progressive neoclassical economics, where market failure is accepted, some government intervention is viewed as necessary and the key debate is about the type and extent of intervention required. For example, neo-classical economists investigate externalities, where market failure occurs because the benefits of an activity can not be fully captured by a private firm, but the activity is essential to maximising growth in the economy overall. Government provision of education and tax concessions for R&D expenditure have been endorsed on these grounds.

Unlike progressive neoclassical economists, rationalists have stopped searching for ways that industry policies could improve economic outcomes over a market allocation of resources. For example, the IC outlined their approach to industry policy in their submission to the 'Mortimer Review' of business programs. They wrote:

Market failure is often given as a reason for government intervention... However, examples of significant 'failure' are few and far between. While markets rarely allocate resources 'perfectly', in time, they will usually deliver reasonable outcomes for most market participants.

Moreover, even where there is potential for governments to improve on market outcomes, often they do not have the necessary information to do so. And government intervention is

⁵¹² Paul Chapman, ch.3 'Australian industry - Surely not "no policy"' in Michael Costa & Michael Easson (eds), *Australian Industry: What Policy?*, Pluto Press in Association with the Lloyd Ross Forum of the Labor Council of New South Wales, Leichhardt, New South Wales, 1991, at pp.69-96 at p.71; and John de Ridder, 'Cumulative causation versus comparative advantage', *Journal of Australian Political Economy*, no.20, October 1986, pp.44-48 at p.46.

not costless. Apart from administrative and compliance costs, raising revenue needed to pay for programs can have significant efficiency costs. Thus, government must be very cautious about their capacity to deliver better outcomes than the market.⁵¹³

Elsewhere the IC have written:

...[O]nly that production which can survive without special treatment from the Government should be regarded as truly viable and internationally competitive.⁵¹⁴

[It is bad to reinforce]...the belief that the provision of assistance is an acceptable practice.⁵¹⁵

The zealous moral overtones of the final quote in particular is striking and shows the complete closure of options for strategic industry policy that results from the extreme rationalism advocated by bodies such as the IC. Market outcomes are seen as legitimate, but government 'intervenes', 'corrupts' or 'distorts'. Assistance is not an acceptable practice!

IC 'inquiries' are based on these fairly extreme views and are therefore almost exclusively about removing all assistance and discrediting government initiatives. The IC rarely undertake serious investigation of whether and how active government policies could increase growth over that achievable by the market alone. For example, in the IC's draft report accompanying its inquiry into regional industry adjustment, they made the blanket statement that '...policies such as tax concessions...lead to a misallocation of resources among economic activities, thereby reducing national income...'⁵¹⁶ This statement was made without consideration of the numerous reports - both in Australia and overseas - that have demonstrated that, in some instances, tax concessions have indeed increased economic welfare by encouraging investment in crucial activities, such as R&D.⁵¹⁷

In short, rationalists have stopped actively considering ways strategic industry policy can improve economic welfare. As Donald Horne has written:

The trouble is that they put their faith in the metaphor of the 'market', and they turn this faith into a mystique which they then pursue without any scepticism at all... [T]he two most grievous errors of economic fundamentalism is that it is utopian and reductionist.⁵¹⁸

This extreme rationalism, which is similar to economic libertarianism, dominated economic debate in the Labor years. Most disciplines have a pluralistic and critical tone. Numerous schools of thought are discussed, compared and actively debated. By contrast, economics has become a discipline in which conforming to the doctrines

⁵¹³ Industry Commission, *Submission to the Review of Business Programs*, Unpublished, 1997, p.16.

⁵¹⁴ Industry Commission, *The Automotive Industry: Report: Report No.5*, Australian Government Publishing Service, Canberra, 1990, p.2,133.

⁵¹⁵ *ibid.*, p.139.

⁵¹⁶ Industry Commission, *Impediments to Regional Industry Adjustment Draft Report: Volume 1: Report*, Industry Commission, Canberra, 1993, p.222.

⁵¹⁷ For example, see Bureau of Industry Economics, *R&D, Innovation and Competitiveness: An Evaluation of the Research and Development Tax Concession: Research Report 50*, Australian Government Publishing Service, Canberra, 1993, p.xi,103.

⁵¹⁸ Donald Horne, 'It's time for a think' in Donald Horne (ed.), *The Trouble With Economic Rationalism*, Scribe Publications, Newham, Victoria, 1992, pp.2-12 at p.8,9.

of one school, namely economic rationalism, has become the key to receiving acknowledgment of one's expertise. Most disturbingly, extreme rationalism dominates policymaking by the Federal economic bureaucracy and the Federal Government.⁵¹⁹ Those economists actively exploring the role that industry policy can play in increasing economic welfare have become a marginalised, scorned minority.

The State and the Market are Intricately Linked

A fatal flaw in the rationalist conceptual framework is the failure to recognise - or at least the tendency to conveniently forget - that the State and the market are intricately linked. Rationalists generally infer that the system is divisible into a pure component, namely the free market, and an impure, distortionary component, namely government activity. This conception ignores the reality that the market has never been unfettered. It has always relied on support provided by government, including the provision of health, education, economic infrastructure and scientific and technological expertise. All production is the result of a mixture of government and market inputs. For example, even firms regularly described in economic discourse as being unassisted or 'left to the market' generally have workers who have been educated in public schools and kept healthy by universal public health insurance. The firm's orderly functioning is facilitated by a publicly funded system of law, police and public administration. The firm may also get its electricity, gas and water from public firms, and transport its goods along public roads or rail systems. This interlinkage of market and State inputs to all production means that the rationalist prescription that everything should be left to the market defies the reality that there is no pure market, separate from government activity.⁵²⁰

This argument can be stated another way. In 1995, the average size of government among small OECD nations was 49 per cent of GDP.⁵²¹ If government constitutes half or even a third of GDP, policy prescriptions stating that everything should be left to the market clearly contradict the reality of industrialised economies.⁵²² Indeed, if government spending were to rise a couple of extra percentage points of GDP in such economies, it would make as much sense to talk about free markets intervening in the 'government economy'.

This is a fatal flaw in the logic underpinning rationalist policy prescriptions. On the one hand, rationalists argue that market forces virtually alone produce optimal economic outcomes. Yet government dominates the ownership of a range of industries, such as education and various infrastructure sectors. If general rationalist mantra were applied in these cases, abolition of such activity would have to be

⁵¹⁹ Peter Ewer, Winton Higgins & Annette Stevens, *Unions and the Future of Australian Manufacturing*, Allen and Unwin, Sydney, 1987, p.53,54.

⁵²⁰ Evan Jones, 'Laissez-faire and the "pure" market are eternal fictions', *The Australian Financial Review*, 20 July 1994, p.18.

⁵²¹ Organisation for Economic Co-operation and Development, *OECD Economic Outlook June 1996*, Organisation for Economic Co-operation and Development, Paris, 1996, p.A30. The figure for small OECD nations comes from the small nations among the 20 OECD nations that provided figures.

⁵²² Philip Yetton, Jeremy Davis & Peter Swan, *Going International: Export Myths and Strategic Realities: Report to the Australian Manufacturing Council*, Australian Graduate School of Management Ltd, Kensington, New South Wales, 1992, p.71.

advocated. For instance, rationalists would have to argue that: 'Funds diverted to education and the system of law and public administration distort market outcomes and therefore the efficiency of resource allocation. These activities therefore reduce economic welfare and should be abolished.' Thus, in some areas, all assistance is deemed welfare reducing. Yet in other areas crucial to economic prosperity, pervasive government involvement is conveniently overlooked.

Rationalists have sometimes sought to overcome this failure in logic by arguing that some areas of policy affecting industry, like tariffs, are 'industry policy' and therefore welfare reducing, while other policies affecting industry, like the education system, are outside the scope of 'industry policy' and are therefore legitimate. Of course, 'industry policy' must be taken to include all the ways government interacts with industry, given that all such activity affects the capacity of industry to compete and grow.

Given the major role of government in the economy - including its majority ownership of some whole industries - the rationalist prescription that industries can't receive small amounts of assistance appears to be flawed. Yet this is what rationalism prescribes. Even generic policies - such as those to improve industry capabilities in R&D, access to finance and technology up-take - are generally viewed as welfare reducing, without active consideration of their benefits. By contrast, majority government ownership of whole industries is conveniently overlooked.

The conception of a pure market is not only false, but also damaging. The government support structures noted above do not constitute unwarranted interference or excessive government intervention. Instead, they are critical to building and maintaining a competitive, high employment growth economy. This system of private firms and government support structures needs constant reconstruction, yet rationalism seeks to eliminate the government support needed to ensure growth and competitiveness.⁵²³

The IC wrote that:

A central, though often understated principle underlying the organisation of modern developed economies is that relatively unencumbered markets generally represent the best way to organise the allocation of scarce resources.⁵²⁴

In reality, without government support structures, private sector activity would be gravely constrained.

Capitalism has always been crucially dependent on State action.⁵²⁵ This has been the experience of all developed nations, including Australia.⁵²⁶ As noted in part one,

⁵²³ Evan Jones, op. cit., p.18.

⁵²⁴ Lattimore, R., Martin, B., Madge, A. & Mills, J., *Design Principles for Small Business Programs and Regulations*, AusInfo, Canberra, 1998, p.48.

⁵²⁵ Donald Horne, 'It's time for a think' in Donald Horne (ed.), op. cit., pp.2-12 at p.7.

⁵²⁶ Greg Crough & Ted Wheelwright, *Australia: A Client State*, Penguin Books, Ringwood, Victoria, 1982, p.88; and Bill Malcolm, ch.6 'Rural industry policies' in Brian W. Head & Allan Patience (eds), *From Fraser to Hawke: Australian Public Policy in the 1980s*, Longmann Cheshire, Melbourne, 1989, op. cit., pp.132-158 at p.133.

massive government capital investment, most notably in transport and communications, was crucial to Australian development and assisted private capital formation.⁵²⁷

Rationalism Provides No Guidance for How to Intervene

Thus, rationalism, which simply prescribes a market allocation of resources and 'no intervention' as a cure-all, provides little guidance as to what policies are required to achieve economic and social well-being. As Brian Toohey has argued:

Once it is accepted that markets can fail - they can result in mountains of toxic waste or allow cripples too die in the gutter - a simple recitation of the abstract virtues of the free market provides little precise guidance for policy.⁵²⁸

Rationalist prescriptions appear to stem from simple acceptance of the implications of the standard neo-classical model, with little or no explanation of areas of market failure. And, as the BIE wrote:

...[The neoclassical model is] able to explain very little because the forces behind growth in these models are determined outside the model. The model has little to offer in terms of policy advice to governments wishing to provide assistance to firms because the long-run growth rate is unaffected by what governments do.⁵²⁹

Thus, rationalism can not provide adequate guidance on what government policies are required to achieve restructuring, employment growth and national competitive advantage.

What Policy, Not No Policy

Thus, we return to the realisation that the rationalist prescription of 'no industry policy' is unhelpful and indeed, highly damaging. The national policy debate must move away from the continuous, unthinking, unimaginative regurgitation of the rationalist maxim that all should be left to the market. Instead of the 'no industry policy' prescription prevailing, it is hoped journalists, economists, bureaucrats, political parties and tertiary economics courses could refocus attention on the critical question that will determine Australia's economic future, namely: 'What mix and type of public and private sector activity is necessary to produce strong economic and employment growth, restructuring and national competitive advantage?' In other words, the national policy debate must shift from the constant recitation of the 'no policy' prescription, and towards active consideration of the critical 'what policy' question. This would involve an open-minded, rigorous investigation of the following questions. In which areas should government activity be largely removed?

⁵²⁷ K. Sheridan & P. Chapman, ch.2 'Australia's economic achievement - Comparison's with Japan in Kyoko Sheridan (ed.), *The Australian Economy in the Japanese Mirror*, University of Queensland Press, St Lucia, Queensland, 1992, pp.5-26 at p.15-20.

⁵²⁸ Brian Toohey, 'Chronicle of a decade that changed us all', *The Sunday Age*, 27 December 1992, Agenda 9.

⁵²⁹ Bureau of Industry Economics, *Recent Developments in the Theory of Economic Growth: Policy Implications: Occasional Paper 11*, Australian Government Publishing Service, Canberra, 1992, p.1.

In which areas and how could existing government activity be usefully augmented? Finally, in which areas and how should new government initiatives be established?

The 'what policy' question needs to be investigated in a vast range of areas, including economic infrastructure, regulation, macroeconomic policy and social policy. Answers to these questions are not attempted below.

The remainder of this thesis discusses those areas crucial to the establishment of an innovation-driven economy because: innovation is perhaps the critical element in establishing national competitive advantage, restructuring and employment growth; and the failure to establish widespread policies to catalyse the creation of an innovation-driven economy is the most important factor explaining the limited economic success of the rationalist paradigm. The next chapter provides evidence for the former proposition, while chapters seven to 14 provide evidence for the latter proposition.

Chapter Six: Innovation - The Missing Link

Introduction

In part one, it was concluded that rationalist policies produced some moderate benefits, but left much of the task of creating a competitive, high employment growth economy to be completed. This chapter argues that the key missing link is innovation.

Innovation: The Key to National Competitive Advantage

A vast body of literature, and the experience of many firms and nations, highlights that the key to national competitive advantage in most areas of world trade lies in being able to innovate, and most particularly, produce and export sophisticated, high quality, innovative products and services, aimed at well defined market niches. This requires that a significant minority of the nation's firms can compete on international markets through customer focused innovation. Success in such segments demands that firms meet customer needs and provide value - through features, style, quality, utility and perhaps brand name - rather than simply provide the cheapest price. Numerous authors have stressed this argument.⁵³⁰

The capacity to undertake process innovation is a crucial accompaniment to excellence in product innovation. Thurow illustrated this point by noting that Japanese companies have dominated sales of the video camera, video recorder, fax and CD players, even though they were invented in other nations. They did this by becoming masters of process technologies, achieved through investment in skills, knowledge and innovative work organisation.⁵³¹

A range of studies have provided evidence that innovation is crucial to achieving competitiveness. For example, the 1992 BIE survey of over 800 R&D tax concession registrants found that product and process innovation were the key to establishing

⁵³⁰ John M. Legge, *A Submission to the Senate Enquiry into the Efficacy of Tariff Protection*, Unpublished, 1992, p.2; Jenny Stewart, *The Lie of the Level Playing Field: Industry Policy and Australia's Future*, Text Publishing, Melbourne, 1994, p.130; Paul Chapman, ch.3 'Australian industry - Surely not 'no policy'' in Michael Costa & Michael Easson (eds), op. cit., pp.69-96 at p.79,80; Bill Mansfield, ch.9 'Trade unions and the challenge of change' in Michael Costa & Michael Easson (eds), op. cit., pp.187-206 at p.192; Michael E. Porter, *The Competitive Advantage of Nations*, The Free Press, New York, USA, 1990, p.45,49-52,173,621; Anand Kulkarni, ch.19 'Networking and industry development' in Michael Costa & Michael Easson (eds), op. cit., pp.357-372 at p.359; Australian Manufacturing Council & McKinsey and Company, *The Wealth of Ideas: How Linkages Help Sustain Innovation and Growth*, Australian Manufacturing Council, Melbourne, 1994, p.1; Peter Ewer, Winton Higgins & Annette Stevens, op. cit., p.39-44,55-56,70,76-77; Stephen S. Cohen & John Zysman, *Manufacturing Matters: The Myth of the Post-Industrial Economy*, Basic Books Inc., New York, USA, 1987, p.206,207; ACTU/TDC Mission to Western Europe, *Australia Reconstructed: ACTU/TDC Mission to Western Europe: A Report by the Mission Members to the ACTU and the TDC*, Australian Government Publishing Service, Canberra, 1987, p.84; Australian Council of Trade Unions, *A Program Towards Full Employment: The ACTU's Program for Sustainable Employment and Jobs Growth for the 1990s and Beyond*, Australian Council of Trade Unions, Melbourne, 1993, p.12,13,24,25; and Ralph Evans, ch.1 'The Global Challenge report and the clash of paradigms' in Michael Costa & Michael Easson (eds), op. cit., pp.15-46 at p.32.

⁵³¹ Lester Thurow, *The Future of Capitalism: How Today's Economic Forces Will Shape Tomorrow's World*, Allen and Unwin, St Leonards, New South Wales, 1997, p.68,69,280.

competitive advantage, while a range of other innovative activities were important contributors.

Importance to Competitiveness of Various Forms of Innovation

Area of Innovation	Ranked 1st or 2nd	Any rank
Products/services	78	89
Processes	64	82
Strategic direction	55	81
Management methods	42	75
Marketing/distribution	42	74
Financial management	40	69
Workplace reform	47	66

Source: Bureau of Industry Economics, R&D, *Innovation and Competitiveness: An Evaluation of the Research and Development Tax Concession: Research Report 50*, Australian Government Publishing Service, Canberra, 1993, p.147.

The survey also found that technological innovation was important to a range of aspects of competitiveness.⁵³²

Degree of Importance of Technological Innovation to Aspects of Competitiveness

Aspect of Competitiveness	None	Some	Important	Very
Product quality, performance	3	9	38	50
Customer satisfaction	4	10	36	50
Product range	9	18	36	37
Profits	9	25	37	30
Costs	13	26	36	26
Production flexibility	16	28	35	21

Source: Bureau of Industry Economics, R&D, *Innovation and Competitiveness*, op. cit., p.145.

Porter's four year, ten nation study into the keys to competitive advantage in hundreds of industries and sectors concluded that national affluence accrues to those nations in which a significant group of firms compete in sophisticated market segments on the basis of innovation in products and services, not on the basis of price alone. In turn, such product and service innovation is achieved through innovation in production, work organisation, technology development, marketing, distribution and a range of other activities.⁵³³ Similar findings were made in Australia by the McKinsey report.⁵³⁴

So exactly how and why is innovation so important to achieving competitive advantage? At its most successful, innovation involves the creation of a product or service that is unique in value in the market due to its features, style, brand, quality or utility, or more likely, a combination of these. Creating unique products is

⁵³² Bureau of Industry Economics, *R&D, Innovation and Competitiveness*, op. cit., p.145.

⁵³³ Michael E. Porter, op. cit., p.21,41,45,49-52,173,554,621.

⁵³⁴ McKinsey and Company & the Australian Manufacturing Council Secretariat, *Emerging Exporters: Australia's High Value-Added Manufacturing Exporters: Final Report of the Study by McKinsey & Company and the Australian Manufacturing Council Secretariat to the Australian Manufacturing Council*, Australian Manufacturing Council, Melbourne, 1993, p.19,20.

important because it can bring premium prices, increased market share and above average returns on investment.⁵³⁵ As John M. Legge argued:

When an innovative product is offered to an appropriate market, there will be no direct competitors and so potential users will judge its value by its probable impact on themselves... It may take from two to ten or more years before imitators are able to offer a functionally similar product to the original entrepreneur's and a further four to ten years before a majority of the original entrepreneur's customers come to believe that the alternative is, in fact, of equal value. During this period the entrepreneur enjoys a competitive advantage. A new product can command extremely high margins for as long as it is unique. The available margins continue high, if diminishing, for some time after that. When an innovative entrepreneurial company can maintain a sufficient rate of innovation, these margins will continue indefinitely, and such entrepreneurs will be able to support affluent lifestyles for themselves, their employees, their suppliers and their country. Professor Michael E. Porter relied on this fact in placing the 'innovative-driven' economy at the top of the hierarchy he described (Porter, 1990: pp. 543-560).⁵³⁶

Similarly, Thurow showed that by constantly creating new products that no competitors could match, companies such as Intel and Microsoft sustained very high returns on investment (or disequilibrium quasi-rents in the terminology of mainstream economics) over the medium-term.⁵³⁷

Thus, to sustain competitive advantage over rivals and continue to reap premium prices, firms (and nations) must have the capacity for continuous innovation. While a premium price can be charged for unique products at the point of first release, the price of a typical product is likely to decline by around 60 per cent over 10 years, as competitors adopt the innovation and customer demand is exhausted. In response, the firm will have to innovate again and again in order to maintain a competitive advantage over rivals and re-ignite consumer demand. The alternative strategy, namely trying to maintain competitiveness and market share by reducing prices, will eventually lead to bankruptcy. The only route to long-term survival is to create better products, not simply cut prices.⁵³⁸

Innovation can also enable firms to sustain their advantage over rivals by broadening the number of distinct sources of advantage. For example, where a company achieves an advantage by creating a unique product, they can help to sustain it by upgrading their marketing, or improving their distribution, or adding new features. The more sources of competitive advantage a firm can create, the more sustainable their advantage will be.⁵³⁹

⁵³⁵ John M. Legge, *The Competitive Edge: How Innovation Creates and Sustains the Competitive Advantage of Enterprises*, Allen and Unwin, North Sydney, New South Wales, 1992, p.32,33,35; and Jenny Stewart, *The Lie of the Level Playing Field*, op. cit., p.54.

⁵³⁶ John M. Legge, *A Submission to the Senate Enquiry into the Efficacy of Tariff Protection*, op. cit., p.2. Jenny Stewart, *The Lie of the Level Playing Field*, op. cit., p.130 states: 'The market monopoly (however transient) of having a new or better-designed product to sell is a key element of international competitiveness.'

⁵³⁷ Lester Thurow, *The Future of Capitalism*, op. cit., p.72,73.

⁵³⁸ John M. Legge, *The Competitive Edge*, op. cit., p.38,39,126. This point is also made in Philip Brass, ch.14 'The need for a national vision' in Michael Costa & Michael Easson (eds), op. cit., pp.271-280 at p.275.

⁵³⁹ Michael E. Porter, op. cit., p.51.

The capacity for continuous innovation can also assist a firm to arrest declining competitiveness. Where a firm's competitors have gained an advantage based on innovation, the firm can seek to ensure its survival in two main ways. Firstly, it can seek to create a new product, or product range, with unique advantages. Where the advantages are significant, this approach has the potential to bring the firm a large or even dominant share of the market. Secondly, the firm can seek to simply match the market leader's product. Such innovation generally needs to occur within 12 to 18 months of the launch of the market leader's product to give the firm a chance of survival in that market segment. However, the benefits of this more conservative approach are likely to be less substantial, as the firm's product has to compete with an accepted product in a growth period, without any value advantage.⁵⁴⁰

By contrast, without the capacity for continuous innovation, firms in high value-added market segments will quickly perish. If a firm fails to match or supersede a market leader's innovations more than two years after the cycle begins, it is very likely to lead to the end of the firm's competition in that market segment, and perhaps even the end of the firm itself. Consumers will change preferences to the market leader's product, and their value advantage and high market share is likely to persist while other firms undertake the two to seven year long process of innovation. By the time the firm has caught up with the market leader's initial innovation, the market leader will have probably innovated again, thereby re-establishing their value advantage and their market dominance.⁵⁴¹

Firms also need the capacity to quickly upgrade products and services because the competitive effect of a new product will be greatest when a firm is first among competitors to bring it to market. Where two previously equal competitors launch products of similar value into the market, the firm that releases their product first will gain a major competitive advantage. Legge estimates that for a typical consumer product, the value of the project is cut more than 20 per cent where the product is launched a year after a competitor launches a product with an innovation of similar value, and by over 50 per cent after three years. The respective losses in the industrial durable sector are nearly 60 per cent after one year and nearly 100 per cent after three years.⁵⁴²

While these 'first mover advantages' are significant in general competition, they can be particularly decisive in emerging market segments. Porter's study found: 'In a remarkable number of industries, early movers sustained position for decades.'⁵⁴³ Firms gain advantage from being 'first movers' because they are first to: reap economies of scale; reduce costs and gain advantage based on innovation through cumulative learning; and establish brand names and customer relationships. First movers also get first selection of distribution channels, production location and sources for inputs.⁵⁴⁴ Thus, economies with the capacity to quickly innovate to create

⁵⁴⁰ John M. Legge, *The Competitive Edge*, op. cit., p.39-41.

⁵⁴¹ *ibid.*, p.36,42,44.

⁵⁴² John M. Legge, *The Competitive Edge*, op. cit., p.229.

⁵⁴³ Michael E. Porter, op. cit., p.47.

⁵⁴⁴ *ibid.*, p.47.

new products and services that meet emerging market segments will be well placed to grow, restructure and compete effectively.

Innovation: The Key to Restructuring and Employment Growth

Innovation is the key to restructuring and employment growth because - rather than seeking to simply sell more existing products - a strategy that leads to ever declining sales, the creation of new products entails entirely new production. Innovation can thus bring growth through the creation of new firms, and, in special cases, whole new industry sectors or market segments.⁵⁴⁵ For example, the walkman, the photocopier and the facsimile machine are just a few of the products which drove Japan's rapid economic growth before the 1990s.⁵⁴⁶

Studies have confirmed the importance of innovation to sales, exports and employment growth. Barraclough (1996), using data collected for the ABS *Innovation in Australian Manufacturing 1994* survey, found that average sales among the 10 per cent of Australian manufacturing firms that were 'integrated innovators' - those that engaged in technological and non-technological innovation - were \$26 million, compared with average sales of \$1 million among the 56 per cent of manufacturing firms that were 'non-innovators'. Average exports among the 'integrated innovators' were \$5.2 million, compared to \$77,000 among 'non-innovators'. 'Integrated innovators' also achieved two times the sales per employee of 'non-innovators' (\$246,000 to \$122,000) and five times the exports per employee (\$8,000 to \$42,000).⁵⁴⁷ Obviously, if many of the 56 per cent of manufacturing firms that are currently 'non-innovators' could be assisted to become 'integrated innovators', national economic, export and employment growth would increase markedly.⁵⁴⁸

The ABS publication, *Innovation in Manufacturing 1996-97*, demonstrated the importance of innovation to creating employment and turnover. It found that, while only 26 per cent of manufacturing businesses undertook technological innovation in the 1 July 1994 to 30 June 1997 period, these businesses contributed two-thirds of total manufacturing employment and three quarters of total manufacturing turnover. On average, these technological innovators had over five times as many employees as non-innovators and almost 10 times as much turnover.⁵⁴⁹ Similarly, a BIE survey of R&D tax concession recipients found that 62 per cent of the sales of firms were primarily due to new or improved products and processes, and the percentage was significantly higher for high value-added manufacturers. Innovation by firms was

⁵⁴⁵ Metal Trades Unions, *Policy for Industry Development and More Jobs*, Metal Trades Unions, Melbourne, 1984, p.265-267.

⁵⁴⁶ Sam Rosevear, 'Best practice and enterprise bargaining: Your edge to competitive advantage', *Benchmark: The Magazine of Workplace Reform*, no.12, August 1995, pp.6-7 at p.6.

⁵⁴⁷ Barraclough and Co., *Enterprise Improvement Through Innovation: A Study for AusIndustry* by Barraclough and Co., Barraclough and Co., n.p., 1996, p.21.

⁵⁴⁸ Barraclough and Co., *Enterprise Improvement Through Innovation*, op. cit., p.21,22 noted that simply attributing the average sales and exports achieved by integrated innovators to other firms in the economy would bring an increase in sales of \$379 billion and an increase in exports of \$104 billion. While this is a simplistic exercise that overstates the potential gains in the medium-term, the findings do illustrate the importance of innovation to growth in sales and exports.

⁵⁴⁹ Australian Bureau of Statistics, *Innovation in Manufacturing 1996-97*, Cat. no.8116.0, p.6.

also correlated with sales growth, increasing market share and overall competitiveness.⁵⁵⁰

Innovation also drives restructuring because it is the key to competitive advantage in the crucial ETM and advanced services sectors. As chapter four showed, these sectors are vital because they are achieving rapid growth in world and Australian trade. Growth in the exports of these innovative sectors also helps to reduce Australia's dependence on commodities, which are experiencing long-term, significant relative decline in world and Australian trade.

The McKinsey report found that innovation is the major basis of competition in the ETM sector. The report noted: 'Most born global firms emerge as a result of significant product or process breakthroughs that apply cutting edge technology, either to developing a unique product or to a better way of doing business.'⁵⁵¹ A survey in 1994 found that 30 per cent of emerging ETM exporters rated having a unique product as one of their top three competitive advantages, while 38 per cent cited technology and 25 per cent cited product design.⁵⁵² Precisely because they are elaborate products, ETMs provide considerable scope for value adding, diversification, technological change and the creation of new products and processes.⁵⁵³

The LEK study of Australia's service exporters found that the key to competitive advantage in advanced services was to produce unique products through a range of innovative activities such as R&D, education and training, marketing, management, leadership, focusing on quality, distribution and delivery, and tailoring products to customer needs.⁵⁵⁴ LEK wrote:

Overwhelmingly, service exporters reported that they were innovative and that innovation plays a big role in their ability to identify markets, replicate their service and successfully deliver it. Many enterprises also reported that remaining innovative was a key to keeping ahead of their competition.⁵⁵⁵

Continuous innovation is of particular importance to the restructuring of the Australian economy because 90 per cent of Australia's emerging exporters operate in niche markets, in which success is dependent on finding and serving the next niche with a better product than any of the competitors.⁵⁵⁶ The McKinsey report on high value-added manufacturers found that faster growing firms were more than twice as likely to develop specific products for export markets as slower growing firms. The report also found that having a high customer orientation and tailoring products to meet particular customer requirements was one of three key elements of best practice among successful ETM exporters.⁵⁵⁷ Among the LEK survey of Australia's leading

⁵⁵⁰ Bureau of Industry Economics, *R&D, Innovation and Competitiveness*, op. cit., p.87,135-137,150.

⁵⁵¹ McKinsey and Company & the Australian Manufacturing Council Secretariat, op. cit., p.11.

⁵⁵² Australian Manufacturing Council & McKinsey and Company, op. cit., p.2.

⁵⁵³ Jenny Stewart, *The Lie of the Level Playing Field*, op. cit., p.46.

⁵⁵⁴ LEK Partnership, op. cit., p.47,48,62.

⁵⁵⁵ *ibid.*, p.61.

⁵⁵⁶ Australian Manufacturing Council & McKinsey and Company, op. cit., p.3.

⁵⁵⁷ McKinsey and Company & the Australian Manufacturing Council Secretariat, op. cit., p.17,20.

service industry exporters, 60 per cent said responding to customer needs was the main driver of innovation.⁵⁵⁸

From a Factor-Driven Economy to an Innovation-Driven Economy

To achieve national affluence, Australia must make the transition from a factor-driven economy to an innovation-driven economy. Porter's study noted a range of stages of competitive development. The first stage is the 'factor-driven' stage, in which a nation's firms gain advantage from basic factors and compete solely on price. Nations at this stage, such as Australia, have little capacity to compete in sophisticated areas of production because they have not mastered the sophisticated capabilities necessary to competing in such market segments. Porter's study shows that competing simply on the basis of price and natural resources can not bring sustained competitiveness and productivity growth, and leaves the nation vulnerable to a swift decline in competitiveness and living standards.⁵⁵⁹

For developed nations in particular, such as Australia, seeking competitive advantage based on cost alone is not sustainable. Lower-order advantages - like low wages, cheap, abundant sources of raw materials, cheap inputs or economies of scale achieved through technology - are relatively easy to imitate, particularly by firms in developing nations with low wage and tax rates. Competing on the basis of cost can therefore only bring short-lived competitive advantage.⁵⁶⁰

As Porter argues, the solution is to move to the 'innovation-driven' stage, which brings national affluence. At this stage, firms compete in sophisticated market segments on the basis of innovation, rather than cost. Indigenous firms continuously create world best products and processes. Leading firms have global strategies, possess their own international marketing and service networks, and have growing brand reputations world-wide. The sophistication of a nation's universities, infrastructure and research facilities grows. New mechanisms form to create, and continually upgrade, advanced and specialised factors. Deep industry clusters develop in sophisticated market segments and often spawn new clusters. A stronger position in sophisticated services emerges, with services that support sophisticated production, such as marketing and engineering, likely to be particularly developed. All components of Porter's diamond - namely rigorous domestic rivalry, sophisticated home demand, clusters of related and supporting industries and factor creation mechanisms capable of producing advanced and specialised factors - are fully in place.⁵⁶¹ For Australia then, the key challenge is to move beyond the factor driven stage, to create an economy that can compete on the basis of innovation.

⁵⁵⁸ LEK Partnership, *Intelligent Exports...and the Silent Revolution in Services*, Australian Trade Commission, Sydney, 1994, p.61.

⁵⁵⁹ Michael E. Porter, op. cit., p.546-549,564,677.

⁵⁶⁰ *ibid.*, p.49,50,641.

⁵⁶¹ *ibid.*, p.552-555.

Rationalism, Costs and an Innovation-Driven Economy

This analysis may provide some insight into why rationalism failed to catalyse Australia's development from a factor-driven economy to an innovation-driven economy. The rationalist policy agenda - including tariff cuts, free market infrastructure policies, small government policies and the deregulation of the labour market - is centrally directed to reducing costs.

It is true that cost reductions improve national competitiveness. Price is clearly one factor influencing a consumer's decision on what product to purchase. Price is particularly important to many small firms in low value-added sectors, where there is little scope to offer value through non-price factors such as quality, features or style. The large growth in employment in small businesses in the Labor years, a large proportion of which was part-time employment, suggests that this sector benefited from improved cost competitiveness. Prices can also be an important consideration in higher value segments where other factors are broadly similar. This has been shown by the success of Hyundai cars in Australia.

However, by focusing on costs, without building the capacity of the nation to innovate, the rationalist policy agenda ensured that Australia remained within the factor-driven stage of development. This may be the key reason why rationalism failed to make significant inroads into unemployment, and left much of the restructuring task yet to be completed.

For Australia to restructure its economy and improve its competitiveness, it must build its capacity to innovate. Throughout industrialised nations, a small core of dynamic, innovative, export-oriented firms make a disproportionate contribution to national competitiveness, and to sales, export and employment growth. As we have seen, the competitiveness of such firms is driven primarily by non-price factors such as quality, features and style. To encourage the growth of such sectors, governments must help to build the nation's capacity for innovation.

Chapters seven to 14 seek to explain why free market policies alone cannot foster an innovation-driven economy. Market failure prevents the establishment of national excellence in each of the capabilities crucial to establishing an innovation-driven economy - such as R&D and export marketing - yet rationalists rule out active policies to build up capacity in these areas.

Chapter Seven: The Innovation Chain

Introduction

This chapter outlines the key arguments and structure of the remainder of the thesis. The key argument is that rationalism can not produce an innovation-driven economy. Strategic industry policies are needed to build up excellence in those capacities – such as R&D, and education and training – which are subject to market failure, but crucial to establishing an economy that can compete on the basis of innovation.

The Innovation Chain

The concept of a 'national innovation system' has been widely discussed in recent literature on innovation and has been defined in various ways by varying authors. For example, the IC have described the national innovation system as comprising '...the institutions performing innovation-related activities; those providing support; and the incentive structure motivating and guiding innovation-related decisions.'⁵⁶² An alternative approach has been the concept of a 'dynamic innovation system', which DIST has defined as including enterprise culture, technology up-take, incremental improvement, R&D and commercialisation.⁵⁶³

This thesis puts forward a simple variant on these conceptions of the national innovation system by introducing the concept of an 'innovation chain'. The concept refers to the range of capabilities that must be mastered if a nation's firms are to consistently achieve product and process innovation. In part two, each chapter discusses one of the capabilities in the innovation chain as follows:

- R&D (Chapter eight);
- Technology Diffusion (Chapter nine);
- Work Organisation (Chapter 10);
- Management (Chapter 11);
- Education and Training (Chapter 12);
- Finance (Chapter 13); and
- Export Marketing (Chapter 14).

⁵⁶² Industry Commission, *Research and Development: Report No.44*, Australian Government Publishing Service, Canberra, 1995, p.79.

⁵⁶³ Michael Welbourne, Martin Wardrop & Kevin Bryant, *The Pace of Change: Technology Up-take and Enterprise Improvement: An Occasional Paper in a Series on Research and Technology, and their Utilisation in Australia*, Australian Government Publishing Service, Canberra, 1994, p.7,8.

Of course, the components of the innovation chain discussed below are not exhaustive, but simply include some of the capabilities of greatest relevance to achieving an innovative economy.

The concept of an 'innovation chain', while simple, is useful for two key reasons.

Firstly, it pinpoints the key capabilities firms and nations must master to achieve competitive advantage through innovation. It therefore provides a tight focus for policy and avoids some methods of industry policy, such as tariffs, unfocused subsidies and ill-advised sectoral policies, which would harm economic welfare, even if directed at innovative sectors. This approach also recognises that a somewhat different emphasis in active government policies is required in the modern era. Given the emergence of a knowledge-based economy, primary emphasis must be on knowledge-based infrastructure, with less relative emphasis on providing basic physical infrastructure, such as gas and water.⁵⁶⁴

Secondly, the concept is entitled 'the innovation *chain*' in recognition of the fact that a firm or a nation will not be able to consistently innovate if it can not achieve excellence in every capability in the innovation chain. For example, a firm may be unable to commercialise an innovative idea if it can not gain access to venture capital. New technology will not be effectively utilised if a firm's work organisation does not facilitate continuous improvement. Effective R&D can not occur without skilled technical staff. Product innovation will be impeded if management cannot grasp opportunities to innovate, or if firms fail to adequately market innovative products. Establishing an economy that is successful at innovation is crucially dependent on achieving excellence in *all* of the capabilities in the innovation chain.

This helps to explain why Australia is poor at commercialising its research⁵⁶⁵ and performs inadequately at innovation more generally. While Labor did implement some useful initiatives in areas like R&D, education and training, and export marketing, national excellence had not been achieved in any of these areas when Labor left office. Inadequate investment in these areas, and, more particularly, the failure to adopt significant reforms in the remaining capabilities in the innovation chain, is the key reason Labor failed to create an innovation-driven economy.

The 'innovation chain' concept provides an overall framework for the discussion in remaining chapters. Each chapter discusses one of the elements of the innovation chain. In most chapters, discussion occurs in four major sections.

In the first section, the importance of the capability to achieving innovation, and in turn, competitive advantage, restructuring, exports and economic and employment

⁵⁶⁴ Lester Thurow, *Head to Head: Coming Economic Battles Among Japan, Europe, and America, Tomorrow*, New York, USA, 1992, p.291.

⁵⁶⁵ Ian Lowe, *Submission to the Parliamentary Inquiry Into Tariffs and Industry Development*, Unpublished, November 1992, p.7 argues that Australia's inability to translate our good record in formulating innovative ideas into marketable products '... has long been our most serious problem.' Australia's poor record at commercialising its research is discussed in: Andrew Theophanous, 'The re-industrialisation of Australia: Some suggestions for government policy', *Journal of Australian Political Economy*, no.20, October 1986, pp.18-28 at p.23; ACTU/TDC Mission to Western Europe, *Australia Reconstructed*, op. cit., p.96,97; and Bureau of Industry Economics, *R&D, Innovation and Competitiveness*, op. cit., p.10,24,25.

growth, will be explained. Given that rationalism barely discusses each of the elements of the innovation chain, it is important to justify their importance. It will be argued that these capabilities should be the central focus of economic policy making.

In the second section, it is argued that the capability - like each of the elements in the innovation chain - is subject to market failure, and that Australia's weaknesses in the area are inhibiting the nation's capacity to compete on the basis of innovation. These sections indicate that Keating was wrong to claim in his launch of the Innovation Statement that: 'Australia already has the ingredients of a dynamic and effective innovation system.'⁵⁶⁶ Labor's inaction in the key areas of the innovation chain, when so many of them were functioning ineffectively, was its key economic failure in government.

In the third section of each chapter, it is argued that rationalist policies have not, and will not, produce excellence in the capability. Despite Australia's weaknesses and the market failures throughout the innovation chain, rationalists advocate little or no active industry policy to improve Australia's poor performance. For example, the IC has stated: '...firms can and do build up competitive advantages more or less independently of the national innovation system in which they operate...'⁵⁶⁷ Rationalists in political parties, the media, universities, and the bureaucracy fail to recognise the importance of innovation and the critical capabilities needed to constantly produce it and are unable or unwilling to acknowledge market failures occurring in areas crucial to establishing an innovative economy. As a consequence, rationalists have no significant policy agenda for creating an innovative economy. Indeed, rationalists rarely even consider policies to create an innovative economy, seem to believe active policy formulation is the task of someone else and almost never attempt to formulate well-researched detailed policies that can create an innovation based economy.

As illustrated on the tables below, rationalist policies have not produced an economy in which a substantial group of firms compete on the basis of innovation. Indeed, the second table indicates that the nation's innovation capacity may even be declining.

Percentage of Businesses Undertaking Innovative Activity 1993-94

Product Innovation	Process Innovation	Technological Innovation (subtotal)	Non-Technological Innovation
7.0	8.8	12.2	13.8

Source: Australian Bureau of Statistics, *Innovation in Industry 1993-94*, Cat. no.8117.0, p.4. Note: The table does not include figures for: agriculture, forestry and fishing; and government administration and defence.

⁵⁶⁶ Paul Keating, *Speech by the Prime Minister, The Hon P. J. Keating MP, The National Trade and Outlook Conference, Melbourne, 6 December 1995*, Unpublished, 1995, p.3.

⁵⁶⁷ See Industry Commission, *Research and Development*, op. cit., p.129.

Proportion of Manufacturing Businesses Undertaking One or More Innovative Activities

Period	Product Innovation	Process Innovation	Technological Innovation	Non-Technological Innovation
July 1991 – June 1994	29.9	23.1	33.7	24.2
July 1994 – June 1997	22.9	17.8	26.0	n/a

Source: Australian Bureau of Statistics, *Innovation in Australian Manufacturing 1994*, Cat. no.8116.0, p.5,7; and Australian Bureau of Statistics, *Innovation in Manufacturing 1996-97*, Cat. no.8116.0, p.7.

These third sections show that the passive 'do-nothing' rationalist approach can never produce an economy that can compete on the basis of innovation. Without government support to build up capacity in each link in the innovation chain, the great bulk of Australian firms will remain unable to continuously innovate, and Australia will continue to have limited capacity to compete on global markets in vital innovation-intensive sectors. This is a key reason why market induced structural adjustment is too slow, not so much in ripping resources away from inefficient sectors, but rather in redeploying resources in growth sectors.⁵⁶⁸ As the Epsie report noted: 'This Committee knows of no country which has succeeded in establishing a climate for investment in high technology enterprises without the government taking positive action and, at a minimum, adopting a catalytic role.'⁵⁶⁹

As Thurow has argued, the key fast growing industries are all man-made 'brainpower' industries that have to be created by nations investing in knowledge and skills. Where such industries will be located depends on who organises the 'brainpower' to capture them.⁵⁷⁰ Similarly, Porter's study found that achieving sustainable competitive advantage through innovation requires sustained, cumulative investment in sophisticated capabilities - such as R&D, technology uptake and export marketing - combined with excellence in performing the activities involved.⁵⁷¹

This helps to explain why the theory of comparative advantage, advocated by many rationalists,⁵⁷² is outdated. In debunking the theory of comparative advantage, Porter writes of 'factor creation' because the factors most important to competitive advantage in most areas of world trade are specialised and advanced factors that have to be created. For example, factors like highly skilled workers and advanced technology are created through a combination of investment by individuals in education and training, investment by governments in the education and training system and R&D programs, and investment by firms in technology and human resources. Factor creating mechanisms include education institutions, apprenticeship programs, research institutes and economic infrastructure providers. Nations achieve

⁵⁶⁸ John M. Legge, *A Submission to the Senate Enquiry into the Efficacy of Tariff Protection*, op. cit., p.13.

⁵⁶⁹ Australian Academy of Technological Sciences, *Developing High Technology Enterprises for Australia: A Report Prepared by the High Technology Financing Committee of the Australian Academy of Technological Sciences for the Minister for Science and Technology*, Australian Academy of Technological Sciences, Parkville, Victoria, 1983, p.2.

⁵⁷⁰ Lester Thurow, *The Future of Capitalism*, op. cit., p.67,71.

⁵⁷¹ Michael E. Porter, op. cit., p.21,24,50.

⁵⁷² Kym Anderson & Ross Garnaut, op. cit., p.28.

competitive advantage, not by relying on natural resource endowments, but by creating and upgrading factors, particularly by maintaining high quality institutional mechanisms for advanced and specialised factor creation.⁵⁷³ Achieving expertise in these crucial capabilities requires enormous planning, co-ordination, strategic thinking, investment and creativity, which are created by firms and can very usefully be fostered by assistance from government.

This is why Porter argued that the key role for government is to foster the capacity of firms to: continuously innovate; upgrade competitive advantages by introducing more sophisticated technology and methods; continuously shift to more advanced, higher productivity market segments; and foster the capacity of firms to compete in new industries.⁵⁷⁴

This is why the pervasive regime of government policies and programs, which account for 30 to 50 per cent of GDP in most industrialised economies, are an important factor in international competition. The industry policy regime of the Australian Government competes with the policies of foreign governments to attract investment and jobs. Hence the importance of strategic economic and industry policies.⁵⁷⁵ As Cohen and Zysman have argued: 'Policy...can help upgrade a nation's competitive position in substantial and enduring ways or it can handicap national producers and accelerate a downward spiral of weakening production capability, slow and timid introductions of new production technologies...[and] offshoring...'⁵⁷⁶ Economic rationalism, by prescribing a weak and ineffectual role for government, is gravely inhibiting national economic development, most crucially, by failing to foster the development of an innovation-driven economy.

In the fourth section of each remaining chapter, overviews of some of the government policies and programs that could bring excellence in the capability are provided. These sections, while not intended to be comprehensive, are important to showing that, in contrast to the rationalist method of relying on the market, strategic industry policies can produce excellence in each component of the innovation chain, and thereby produce competitive advantage through innovation. They also seek to answer the frequent rationalist claim that its opponents criticise but rarely provide credible alternative policies that could benefit the economy. Governments in many OECD and Asian nations have for decades adopted positive innovation policies.⁵⁷⁷ Such policies have succeeded in establishing national capabilities to assist firms to continuously innovative and build significant positions in vital ETM and innovative services sectors. Australian governments must do the same.

Australian policymakers must cast off the false certainty and security offered by the 'no industry policy' prescription. Rationalists, by denying market failure and denying the utility of active government programs, can avoid difficult questions and believe that complex economic problems can be solved by simple prescriptions, such

⁵⁷³ Michael E. Porter, *op. cit.*, p.74,77-80.

⁵⁷⁴ *ibid.*, p.617,618.

⁵⁷⁵ Philip Yetton, Jeremy Davis & Peter Swan, *op. cit.*, p.72.

⁵⁷⁶ Stephen S. Cohen & John Zysman, *op. cit.*, p.xiv.

⁵⁷⁷ Australian Academy of Technological Sciences, *op. cit.*, p.24,25.

as leaving everything to the market, and cutting wages and taxes. The most important economic questions lie beyond the simple prescriptions that dominate mainstream Australian economic rationalism, in the areas where there is market failure and where active government policies may be able to foster competitive advantage. It is through research and policy creation in these areas that an innovative, competitive economy can be built. However, opening up these questions exposes a complex world where solutions are difficult to pinpoint, mistakes can be made and economics is revealed to be a helpful guide in a complex global economy, rather than an all-knowing science. In short, national debate must shift away from the 'no policy prescription', to address the 'what policy question'. If readers find themselves engaging in debate with the policy prescriptions outlined below, agreeing with some ideas, believing others to be futile and feeling others could work with adjustment, then the thesis has achieved its aim, to move the economic debate onto the grounds that will determine Australia's future. A continuation of rationalist policy will not produce an innovative economy and will produce ever declining living standards. Only through engaging in the difficult, imperfect and complex task of implementing active industry policies aimed at creating an innovative economy can Australia achieve national economic (and social) prosperity.

The industry policies that stem from focusing on the innovation chain have a number of benefits. Firstly, they are primarily directed to establishing excellence in each link in the innovation chain for the benefit of all firms. Generically available policies can avoid the pitfalls involved with sectoral targeting. While in some nations at particular times, targeting may be able to foster growth of emerging or highly formed clusters of related and supporting industries, Australia has not yet achieved significant clusters of globally competitive sectors outside unprocessed resource based industries.⁵⁷⁸ In addition, while some sectors are dominated by ETMs and advanced services, these innovation-intensive firms can be found within the sophisticated market segments of all manufacturing and services sectors. For these reasons, the best approach may be to mainly provide generically available programs that build up excellence in capabilities that are vital to the achievement of innovation by all firms in the economy. Such policies can be expected to be taken up disproportionately by innovation-intensive ETMs and sophisticated services firms and so encourage sound restructuring, thereby producing targeting in effect, without extensive use of explicit sectoral targeting. In a small minority of cases, where clearly justified, the policies outlined in part two will advocate targeting to ETMs and sophisticated services, but targeting of individual sectors or clusters is never advocated.

The policies advocated satisfy Porter's instruction that government should aim to provide firms with the tools necessary to compete through policies to bolster factor creation, while ensuring firms are under strong competitive pressure. Government must be careful to avoid providing any assistance that reduces the pressure on firms to continuously upgrade.⁵⁷⁹ This was a key mistake made in Australia's long high

⁵⁷⁸ Pappas, Carter, Evans & Koop/Telesis, *The Global Challenge: Australian Manufacturing in the 1990s: Final Report of the Pappas, Carter, Evans and Koop/Telesis Study*, Australian Manufacturing Council, Melbourne, 1990, p.24,25,124,125,136,137.

⁵⁷⁹ Michael E. Porter, *The Competitive Advantage of Nations*, The Free Press, New York, USA, 1990, p.681.

tariff era, during which firms became complacent because they were shielded from international competition whenever it threatened production and employment.

The policies to follow also focus primarily on assisting indigenous firms because they view the nation as home base, and therefore develop competence in the innovative activities necessary for achieving national competitive advantage at home. By contrast, foreign multinationals generally keep the high value parts of their production chain in their home nation. Dependence on foreign sources for technology means firms can catch up to world best practice, but never surpass it. Therefore, foreign firms are less valuable vehicles for creating an innovation-driven economy.⁵⁸⁰

The industry policy advocated below is also a challenge to the view that the size of government must be reduced *at any cost*. It is true that the level and complexity of company tax is an important determinant of national competitiveness. Australia should therefore seek to retain its relatively small government sector by OECD standards and establish a competitive business tax regime. However, as chapter three showed, while government consumption expenditure can harm economic outcomes, the level of total (public and private) investment is a major determinant of economic growth. Given Australia's weaknesses throughout the innovation chain, Australian Governments will need to invest significantly in the coming decades if we are to create an innovation-driven economy.⁵⁸¹

Thurow has argued that capitalism faces a major challenge because its logic, and the ideology currently dominating many Western economies, is focused on radical short run individualism, when the future of capitalism is dependent on nations making significant, long run, social investments in R&D, skills, knowledge, education and infrastructure, which are not in any individual's immediate self interest. Only through forcing a high level of public and private investment in these activities can capitalism maximise its long-term growth.⁵⁸²

Relying on the market to bring excellence in the components of the innovation chain has not and will not work because each suffers significant market failure. Only by government helping industry to achieve excellence in these capabilities can Australia hope to compete on the basis of innovation.

⁵⁸⁰ Michael E. Porter, *op. cit.*, p.677,678.

⁵⁸¹ Michael E. Porter, *op. cit.*, p.622,623 notes that achieving competitive advantage in an industry generally takes a decade or more because it requires sustained investment in skill formation and new products and processes, building clusters and penetrating foreign markets.

⁵⁸² Lester Thurow, *The Future of Capitalism*, *op. cit.*, p.281,303,306,308,309,326.

Chapter Eight: Research and Development

1. The Importance of R&D to Competitive Advantage Based on Innovation

R&D is crucial because it is central to the product innovation process, as well as to process innovations that can improve efficiency, lower costs and help create product innovation. Not surprisingly, studies indicate that business investment in R&D brings, on average, significant returns to individual firms and, through spillovers, to industries and the economy as a whole. After an extensive survey of empirical work in the area, the IC concluded that estimates on returns to individual firms vary between a range of 15 per cent to 50 per cent, or 1.2 to 4 times the return to physical capital. Estimates of industry level returns are generally in a range of 10 to 50 per cent. Regarding spillovers, studies indicate that the rate of return in other industries to R&D carried out in a particular industry may be around 75 per cent.⁵⁸³ A study by Coe and Helpman (1993) estimated returns on investment in R&D to the nation were 100 per cent among G7 countries and 90 per cent among the 15 non-G7 countries included in the study. The IC estimated that the social rate of return to investment by Australian firms in R&D was likely to be between 25 per cent and 90 per cent.⁵⁸⁴

BIE surveys also provided evidence that R&D leads to growth in sales and profits. Between 1988-89 and 1991-92, recipients of the 150 per cent R&D tax concession in manufacturing achieved annual sales growth of 5.9 per cent annually, compared to 2.4 per cent for all firms. Between 1989-90 and 1991-92, concession recipients in manufacturing had a profit to turnover ratio of 6.7 per cent compared to 3.6 per cent for all firms.⁵⁸⁵

An in-house capacity for R&D is a key driver of innovation within a firm. In order to capitalise on opportunities created by the expansion of new knowledge, firms must be able to firstly, recognise that new knowledge could have value, secondly, have the capacity to monitor and evaluate new knowledge relevant to innovation in their sector, and thirdly, be able to exploit new knowledge by creating new products or processes or improving efficiency. These are complex tasks which require significant commitment and experience to master. Only with a substantial, on-going in-house R&D capability can firms effectively monitor, recognise, evaluate and exploit new knowledge. By contrast, firms without an internal R&D capability cut themselves off from the innovation process.⁵⁸⁶

2. Market Failure and Australia's Weaknesses in R&D

Markets fail to bring the optimal amount of R&D for several reasons. Firstly, the public good nature of R&D means that some of the benefits which flow from R&D cannot be appropriated by the firms carrying it out, but rather spill over to other

⁵⁸³ Industry Commission, *Research and Development*, op. cit., p.142.

⁵⁸⁴ *ibid.*, p.156-158.

⁵⁸⁵ Bureau of Industry Economics, *R&D, Innovation and Competitiveness*, op. cit., p.141-143.

⁵⁸⁶ Michael Welbourne, Martin Wardrop & Kevin Bryant, op. cit., p.15,21,27,136; and Industry Commission, *Research and Development*, op. cit., p.73,148.

firms who can use the knowledge to drive their own innovation. Other firms can also benefit from the migration of researchers, their skills and human capital from the R&D performing firm. Because private returns to R&D are based on the benefits that firms capture, the presence of spillovers may result in a lower level of investment in R&D activity than necessary to produce optimum innovation and economic growth.⁵⁸⁷ As even the IC have argued: 'Where spill-overs exist - and empirical work suggests that they are widespread - there is prospect that not enough R&D will be performed unless government steps in [to increase the private incentive to undertake R&D].'⁵⁸⁸

Secondly, firms may lack access to the R&D information they need to maximise their profitability and growth. Managers, particularly in small firms, may lack the awareness, time, resources and skills necessary for undertaking the very complex task of monitoring the latest developments in knowledge relevant to their firm occurring world wide.⁵⁸⁹

Thirdly, firms may under-invest in R&D because the results to be gained are difficult to predict and firms may be unable to afford the possibility that a costly investment may fail. New product successes are somewhat infrequent. Several new product ideas are necessary for every product that succeeds.⁵⁹⁰ While the IC is lukewarm about risk and uncertainty as a rationale for government intervention, even they admit: 'Innovation, because of its inherent technological and market uncertainties, need not always be successful. It will only occur in the first place if firms have either a strong incentive to undertake it or are under threat of extinction if they fail to do so.'⁵⁹¹ The ABS Innovation in Manufacturing Survey showed that innovation projects are risky. Among businesses undertaking technological innovation between July 1994 and June 1997, 31.7 per cent had abandoned innovation projects for a variety of reasons such as costs being too high and difficult to control, expected returns being too low, the payback period being too long, competitor activity making their project obsolete and being unable to resolve technical difficulties. The survey found that 32.6 per cent of businesses undertaking technological innovation stated 'excessive economic risk perceived by business or parent company' was an important barrier to the commencement of innovation projects.⁵⁹² While rationalists may wish to argue that risk does not constitute a market failure in theory, in practice, many firms faced with such risk do not invest in R&D, even though their projects may have turned out to be profitable. The result is an under-investment in R&D on an economy-wide basis.

Fourthly, smaller firms may invest insufficiently in R&D because such investment sometimes involves high fixed laboratory and equipment costs, meaning they are

⁵⁸⁷ Bureau of Industry Economics, *R&D, Innovation and Competitiveness*, op. cit., p.18; and Industry Commission, *Research and Development*, op. cit., p.10,189.

⁵⁸⁸ Industry Commission, *Research and Development*, op. cit., p.10.

⁵⁸⁹ Michael Welbourne, Martin Wardrop & Kevin Bryant, op. cit., p.23-24.

⁵⁹⁰ Lee D. Dahringer & Hans Muhlbacher, *International Marketing*, Addison-Wesley Publishing Company, Sydney, 1991, p.361.

⁵⁹¹ Industry Commission, *Research and Development*, op. cit., p.148.

⁵⁹² Australian Bureau of Statistics, *Innovation in Manufacturing 1996-97*, Cat. no.8116.0, p.13,14.

unable to realise scale economies or make the minimum investment necessary. For all these reasons, relying on the market alone to create and diffuse technology will lead to sub-optimal outcomes.⁵⁹³

Australia's R&D performance is poor. It invests too little in R&D overall, and insufficient investment by private firms is a particular problem. Near the end of the Labor years, when nations such as Sweden, Switzerland, Japan, the United States and Germany were all investing around three per cent of GDP in R&D, the great majority of it private, Australia was investing less than half that as a percentage of GDP, with most of it public.⁵⁹⁴

Australia's business expenditure on R&D (BERD) to GDP ratio was very low by international standards when Labor came to power, being only 0.26 per cent of GDP in 1983, compared to 0.94 per cent among OECD nations. For decades, government reports had recognised Australia's low private sector R&D expenditure,⁵⁹⁵ but only piecemeal attempts were made to rectify the problem. Programs attempted involved minimal expenditure, were inadequately targeted and poorly administered and private sector R&D expenditure as a proportion of GDP fell by half between 1968-69 and 1981-82.⁵⁹⁶ By contrast, as Labor globalised the economy and implemented active R&D policies, BERD grew rapidly. By 1995, Australia's BERD had risen to 0.87 per cent of GDP. However, it was still one-third below the OECD average of 1.23 per cent.⁵⁹⁷

Only a small minority of Australian firms consistently perform R&D. The 1993 BIE study found that only around 1,000 firms consistently performed R&D, which paled into insignificance against the roughly 48,000 manufacturing firms or the 550,000 businesses operating in all sectors of the economy at that time.⁵⁹⁸ *Scoreboard '97* reported that only 2 per cent of firms were undertaking R&D.⁵⁹⁹ Thus, most firms are largely removed from the innovation process.

While the quantity of Australia's public investment in R&D is sound by OECD standards, too much is unrelated to assisting businesses to develop ideas they have for new products and processes, either indirectly, through generic research, or directly, through contract work with firms. IMD's *World Competitiveness Yearbook 1996* found that Australia ranked a mediocre 24th in the utility of basic research in encouraging long-term economic and technological development.⁶⁰⁰ The McKinsey

⁵⁹³ Michael Welbourne, Martin Wardrop & Kevin Bryant, op. cit., p.23-24.

⁵⁹⁴ LEK Partnership, op. cit., p.68.

⁵⁹⁵ For example, see *White Paper on Manufacturing Industry*, Australian Government Publishing Service, Canberra, 1977, p.26.

⁵⁹⁶ Peter Ewer, Winton Higgins & Annette Stevens, op. cit., p.86.

⁵⁹⁷ Figures calculated at my request by the Science and Technology Policy Branch, Department of Industry, Science and Tourism, August 1998. Note that the OECD average is only for the 19 countries for which reliable data was available namely Ireland, Australia, Sweden, Denmark, Canada, Finland, Austria, Norway, France, New Zealand, Japan, Spain, United States, Belgium, United Kingdom, Netherlands, Italy, Germany and Switzerland.

⁵⁹⁸ Bureau of Industry Economics, *R&D, Innovation and Competitiveness*, op. cit., p.10,56.

⁵⁹⁹ Coopers & Lybrand, *Scoreboard 97*, Department of Industry, Science and Tourism, Canberra, 1997, p.5.

⁶⁰⁰ IMD, *World Competitiveness Yearbook 1996*, IMD, Lausanne, Switzerland, 1996, p.530.

report showed that less than ten per cent of emerging exporters had research connections to a research institution such as the CSIRO or a university and that many firms felt lack of technology was a critical constraint to their growth.⁶⁰¹ Only 11 per cent of emerging exporters rated public R&D partners as 'very important or critical' joint-initiative partners.⁶⁰² ABS data shown below confirms that public (and private) researchers are failing to provide Australian manufacturers with many ideas to propel their product or process innovation.

Sources of Ideas and Information for Technological Innovation Undertaken by Manufacturers by Importance

Source	Not Important	Slightly Significant	Moderately Significant	Very Significant	Crucial
Higher education institutions	80.5	12.5	5.2	1.1	0.8
Government laboratories	87.5	7.6	3.9	1.0	0.1
Private research institutes	87.7	6.6	4.0	1.1	0.6

Source: Australian Bureau of Statistics, *Innovation in Australian Manufacturing 1994*, Cat. no.8116.0, p.33.

These figures are particularly disturbing because they only include the 33.7 per cent of manufacturers that undertook technological innovation at some point in the three year period between July 1991 and June 1994. Most ideas gathered by firms for technological innovation came from within the firm or through external commercial sources such as suppliers, customers and other industry sources.⁶⁰³

The weak linkages between researchers and industry is a critical weakness in Australia's innovation chain because there is evidence that successful innovation by firms is dependent on effective communication with external sources of scientific and technological expertise and advice. This is all the more concerning because research indicates there are hundreds of firms who could commercialise research, but whose potential remains untapped because of a lack of linkages with researchers.⁶⁰⁴

Weak linkages between public researchers and industry persist for a range of reasons, including: the fact that a significant amount of public research is unrelated to any practical outcome, let alone economic reward; low BERD; the reluctance of some academics and researchers to assist new technology firms;⁶⁰⁵ the loss of technically minded workers to major firms overseas due to the few opportunities available in Australia;⁶⁰⁶ and the cultural gap between public sector researchers and people in private firms.⁶⁰⁷ Firms sometimes view public sector research institutions as

⁶⁰¹ McKinsey and Company & the Australian Manufacturing Council Secretariat, *Emerging Exporters*, op. cit., p.54,55.

⁶⁰² Australian Manufacturing Council & McKinsey and Company, *The Wealth of Ideas*, op. cit., p.34.

⁶⁰³ Australian Bureau of Statistics, *Innovation in Australian Manufacturing 1994*, Cat. no.8116.0, p.7,33.

⁶⁰⁴ McKinsey and Company & the Australian Manufacturing Council Secretariat, op. cit., p.54,55.

⁶⁰⁵ Australian Academy of Technological Sciences, op. cit., p.43.

⁶⁰⁶ *ibid.*, p.12.

⁶⁰⁷ Industry Commission, *Research and Development*, op. cit., p.40.

inefficient, remote and impractical, while researchers sometimes focus on their own priorities, rather than those of firms. The cultural gulf between researchers and firms remains large, in contrast to the increasingly close relations being developed throughout the industrialised world.⁶⁰⁸ The lack of effective interaction between researchers and firms means the benefits of Australia's research are often realised overseas.⁶⁰⁹

Innovation is also impeded by the small size of Australia's ETM and capital goods sectors. Researchers that produce innovative ideas often have to pursue commercialisation offshore because firms capable of taking up the idea do not exist in Australia.⁶¹⁰ Where such firms do exist, their small size and the small size of the domestic market makes it harder for them to absorb large innovation costs and adopt major internationalisation strategies.⁶¹¹ Causation also runs in the other direction. Without a strong manufacturing industry in Australia, innovative ideas are less likely to be developed. Without the stimulus of practical commercial problems to be resolved, Australia's public sector R&D effort has tended to reflect the priorities of the R&D institutions, not business.⁶¹²

3. Rationalism and R&D

Labor's initiatives to encourage R&D generally occurred in spite of the protests of rationalists in the bureaucracy, who did not understand the importance of innovation to competitive advantage. For example, Ministers with industry-related portfolios were delighted that the 150 per cent R&D tax concession was retained in the 1991 Industry Statement, given opposition from Treasurer Keating and Treasury, who for years fought to have the concession scrapped.⁶¹³ This is precisely the extreme rationalism against which this thesis argues. If rationalists can't even support government assistance to R&D, they certainly remain open to the criticism that they automatically prescribe a market solution to virtually all problems and have ceased thinking about where government can increase growth. This stands in contrast to progressive neoclassical economists who have supported the tax concession due to spillovers and the lack of appropriability of the benefits by firms.⁶¹⁴

In fairness, the IC did complete a report on R&D in 1995 which included a quantitative assessment that concluded that '...removal of the tax concession would

⁶⁰⁸ Michael Welbourne, Martin Wardrop & Kevin Bryant, op. cit., p.45,46.

⁶⁰⁹ Anand Kulkarni, ch.19 'Networking and industry development' in Michael Costa & Michael Easson (eds), *Australian Industry: What Policy?*, Pluto Press in Association with the Lloyd Ross Forum of the Labor Council of New South Wales, Leichhardt, New South Wales, 1991, pp.357-372 at p.367; and Australian Academy of Technological Sciences, op. cit., p.12.

⁶¹⁰ Ian Lowe, op. cit., p.7; and Department of Employment, Education and Training, *Committee to Review Higher Education Research Policy: Report*, Australian Government Publishing Service, Canberra, 1989, p.35.

⁶¹¹ K. Sheridan and P. Chapman, ch. 7 'Lessons for the future' in Kyoko Sheridan (ed.), op. cit., pp.122-147 at p.126,136.

⁶¹² Jenny Stewart, *The Lie of the Level Playing Field*, op. cit., p.67,103.

⁶¹³ Bruce Juddery 'Free trade the winner as tariffs are cut', *Australian Business*, vol.11, no.21, 20 March 1991, pp.22-23 at p.23.

⁶¹⁴ Bureau of Industry Economics, *R&D, Innovation and Competitiveness*, op. cit., p.18.

lead to a reduction in GDP.⁶¹⁵ It is rare that rationalists can ever agree that active industry policies can improve economic performance, so this was an important breakthrough. However, one belated report after decades of inactivity in R&D policy, and continuing inactivity after the report, hardly indicates that rationalists have made a serious shift towards serious exploration of industry policies that could produce an innovative economy.

The IC report shows why hardline rationalism will never produce an innovative economy. Throughout the report, discussion is largely focused on arguing why active government policies can fail. It almost reads like the IC is seeking to justify continuing inaction. By contrast, little thought is given to how government policies could or were improving business investment in R&D. Equally disturbing is the lack of open-minded research into policies advocated in literature or on the plethora of R&D policies run successfully by nations overseas. The best the IC can do is 'Some Guidelines for R&D Policy Design'.⁶¹⁶ Presumably, these guidelines are for anyone wishing to develop active policy proposals to encourage R&D! One has to ask why rationalists never think it's their role to develop active government policy and program proposals. As the Federal Government's key adviser on industry policy, surely the IC should produce creative policy options, beyond how to cut or re-work existing programs. Rationalism is seemingly unable to even attempt the exploration of policy options, let alone the creation of pro-active policies to improve R&D or innovation more broadly.

The IC chapter on 'Rationales for Government Intervention' pinpoints spill-overs as the only legitimate basis for intervention, and then attempts to discredit a range of other rationales for government action to encourage BERD. By defining the rationale for intervention narrowly, they create a framework for rejecting many sensible proposals to encourage innovation by firms. For example, because spillovers are seen as the only suitable rationale for assistance, the IC argue that no assistance should be provided to firms for commercialising R&D,⁶¹⁷ even though Australia has long been poor at commercialising its research. When confronted with the stark difference between rationalist theory and the reality that Australia has a decades old deficiency in commercialising its research effort, the IC disregard reality and reaffirm their theory.

The IC chapter goes on to quote a commissioned paper by Dowrick which states that: countries should not seek to imitate other high growth countries who have achieved competitive advantage; Australia's poor R&D performance by international standards is not evidence that more R&D would improve economic welfare; and private institutions may be better than government at correcting failure in the market for knowledge.⁶¹⁸ The IC also regurgitates its old chest-nuts that: R&D incentives might create high technology industries ill-suited to the '...nature of the

⁶¹⁵ Industry Commission, *Research and Development*, op. cit., p.29.

⁶¹⁶ See Industry Commission, *Research and Development*, op. cit., pp.194-204.

⁶¹⁷ Industry Commission, *Research and Development*, op. cit., p.36.

⁶¹⁸ See 'A5 Rationales for Government Involvement' in Industry Commission, *Research and Development*, op. cit., pp.161-180.

economy...⁶¹⁹; R&D assistance will assist some industries at a cost to others; excessive assistance to R&D will reduce economic welfare; and market failure might not justify intervention because government action might do more harm than good.⁶²⁰ While there are elements of truth to all these statements, they comprise an inappropriate focus given that innovation is the key to competitive advantage, yet Australian firms are generally non-innovators. Taken together, the chapter is really about justifying continued inaction on the part of government.

Particularly disturbing is the IC's assertion that:

The lower R&D expenditure, relative to production, of Australian companies can be explained by the long standing protection of manufacturing and Australia's traditionally low participation in world trade... The Commission does not consider the gap between Australian business R&D intensity and that overseas to be attributable to lack of government assistance.⁶²¹

The IC at least note that the Government's implementation of various policies to encourage BERD happened at the same time as BERD increased significantly,⁶²² after decades of stagnation, although presumably the IC believed that these two happenings were co-incidental. The message is that free market microeconomic reforms will solve Australia's economic problems, and no active industry policy is required. While it is no doubt true that exposing firms to increased competition and greater participation in world trade forced some firms to search for better ways of competing, the fact that Australia's BERD performance remains so poor by international standards after 15 years of rationalist policy indicates that more needs to be done to encourage R&D. Yet despite Australia's poor R&D performance, the IC remain wedded to a rationalist policy paradigm that permits little or no government action to help create an innovative economy.

The rationalist approach to targeting R&D assistance is also flawed. In the rare cases where rationalists recommend generic industry policies, the approach is typified by the following recommendation from the not always rationalist BIE: 'The BIE recommends that, as a general principle, the level of total support to business R&D should be uniform across all sectors unless higher than average spillover benefits can be demonstrated.'⁶²³ While this statement is perfectly sensible, the problem is that rationalists never undertake detailed investigation of whether higher than average spill-over benefits do arise from supporting any particular sector and instead automatically recommend uniform benefits.

In practice, rationalists are against any targeting of R&D assistance, claiming that it is not possible to distinguish between the variation in R&D spill-overs between firms and sectors.⁶²⁴ The weakness of the rationalist approach is shown in the IC report in

⁶¹⁹ Industry Commission, *Research and Development*, op. cit., p.177.

⁶²⁰ *ibid.*, p.177,178.

⁶²¹ Industry Commission, *Research and Development*, op. cit., p.27.

⁶²² *ibid.*, p.28.

⁶²³ Bureau of Industry Economics, *R&D, Innovation and Competitiveness*, op. cit., p.189.

⁶²⁴ Industry Commission, *Research and Development*, op. cit., p.188.

which, on one page, the IC note that '...the most R&D intensive industries - computers, communication equipment, electronic components and aircraft - are those where spillovers appear greatest',⁶²⁵ but later in the page argue that targeting of assistance is doomed to failure because '...there is not adequate information to allow fine judgements to be made between research proposals in terms of their likely net social payoff.'⁶²⁶ This argument appears to suggest that certain sectors are innovation-intensive and produce greater than average spill-overs, but policy should not target particular sectors because it is not possible to determine which sectors bring the greatest spill-overs.

The rationalist argument against targeting is flawed for two key reasons.

Firstly, the rationalist view fails to recognise that targeting already occurs within so called 'generic' industry policies. For example, the 150 per cent R&D tax concession provides uneven assistance between firms. Six sectors account for 60 per cent of eligible R&D and 5 per cent of firms account for nearly 60 per cent of R&D expenditure.⁶²⁷ Thus, generic R&D schemes result in targeting innovation-intensive firms and sectors.

Secondly, some targeting may be appropriate because contrary to rationalist dogma, there are clear differences in R&D intensity and expenditure between industries. For example, well over three quarters of business expenditure on R&D is undertaken by manufacturing,⁶²⁸ despite manufacturing production comprising less than 20 per cent of total production. The table below shows that far more innovation occurs in manufacturing than the average for all industries.

Percentage of Businesses Undertaking Innovative Activity 1993-94

Industry	Product Innovation	Process Innovation	Technological Innovation (subtotal)	Non-Technological Innovation
Manufacturing	30.7	22.5	34.8	23.3
All Industries	7.0	8.8	12.2	13.8

Source: Australian Bureau of Statistics, *Innovation in Industry 1993-94*, Cat. no.8117.0, p.4. Note: 'All industries' excludes: agriculture, forestry and fishing; and government administration and defence.

Furthermore, differences in R&D intensity between sectors can be clearly deduced. For example, the *R&D Scoreboard* series has shown that sectors such as biotechnology, computer software and services, electronic equipment manufacturing, medical and scientific equipment, and telecommunications have a significantly greater R&D intensity performance than average.⁶²⁹

Given these facts, targeting particular sectors or industries may maximise returns in certain instances. At present, much of Australia's public R&D effort is concentrated

⁶²⁵ *ibid.*, p.197.

⁶²⁶ *ibid.*, p.197.

⁶²⁷ Bureau of Industry Economics, *R&D, Innovation and Competitiveness*, *op. cit.*, p.56.

⁶²⁸ Department of Industry, Science and Tourism, *Australian Science and Technology at a Glance 1997*, Australian Government Publishing Service, Canberra, 1997, p.22.

⁶²⁹ For example, see Coopers & Lybrand, *Scoreboard 97*, *op. cit.*, p.1-4,50.

on agriculture and mining, sectors in which prices are in long run relative decline. The IC estimated that at 1990-91 the effective rate of R&D assistance to agriculture was 3.4 per cent, while manufacturing received just 1.2 per cent and services close to nothing.⁶³⁰ There appears to be a case for redirecting more public R&D investment to manufactures, particularly ETMs, as well as high value-added services in which there is much greater scope for innovation and value adding (not to mention export growth and employment creation) than in unprocessed commodities.⁶³¹ Such targeting can be a market conforming strategy, speeding up restructuring to growth sectors and improving resource allocation, rather than distorting it as rationalists assert virtually any non-market policy does.

Achieving and maintaining competitive advantage and significant world exports in advanced production requires continuous innovation. This requires a consistently large R&D effort. No nation can achieve this in more than a significant minority of sectors. The implication for policy is that, while policy should generally be available to all firms, some public R&D investment could usefully be targeted at ETMs and sophisticated services.

4. Industry Policies to Foster Excellence in R&D

Encouraging R&D Performed by Firms

Australia's R&D policies should be more strongly focused on encouraging R&D by firms. While only some of the R&D performed by public institutions is directed to increasing national economic performance, R&D completed by firms is likely to focus on core business needs. For example, business completes 80 per cent of Australia's experimental development and has a strong focus on commercialisation.⁶³² Most of the ideas for technological innovation in Australian manufacturing come from within a firm's business group or external commercial sources such as customers, suppliers and other industry sources, rather than research institutes.⁶³³ User-driven research is therefore the most efficient way of creating product innovation, sales and export growth and job creation. Empirical studies suggest that R&D by firms: typically produces returns of 15 to 50 per cent; produces significant spillover benefits to other firms throughout the economy; and produces returns significantly higher than returns from research undertaken in public institutions. In short, firms are the key agents in the economy for converting R&D knowledge into improved economic outcomes.⁶³⁴ Therefore, R&D policy must place more emphasis on assisting firms to innovate.

Internationally, there has been a trend towards R&D funding and performance occurring in the business sector, rather than in government. Importantly, firms tend to keep their R&D activities in their home nation, even where they expand their activities internationally. Governments have therefore encouraged the trend towards

⁶³⁰ Industry Commission, *Research and Development*, op. cit., p.89.

⁶³¹ Ian Lowe, op. cit., p.1,4,5.

⁶³² Industry Commission, *Research and Development*, op. cit., p.6,11,73,81.

⁶³³ Australian Bureau of Statistics, *Innovation in Australian Manufacturing 1994*, Cat. no.8116.0, p.33.

⁶³⁴ Industry Commission, *Research and Development*, op. cit., p.56,142.

the performance of R&D by firms, recognising that such activity builds up national capabilities in R&D.⁶³⁵

Despite these trends, the Federal Government continued to give too little emphasis to encouraging BERD. The IC's 1995 report on R&D noted that, whereas 58 per cent of Federal Government funding supporting industry went to government research agencies and Universities, and a further 24 per cent is allocated to grants and other public programs, incentives for business sector R&D comprise only 18 per cent of such funding.⁶³⁶ Given the crucial importance of R&D by firms to national competitiveness, and Australia's weakness in BERD, greater emphasis needs to be placed on encouraging BERD.

While more needs to be done to encourage BERD, Labor did much to encourage it through the 150 per cent R&D tax concession, the Grants for Industry Research and Development (GIRD) Scheme and the Co-operative Research Centres (CRC) program. The success of these programs demonstrates the important role government can play in creating an innovation-driven economy.

The tax concession improved Australia's R&D effort above that deliverable by the market alone. A BIE study on the tax concession concluded that, between 1984-85 and 1986-87, the concession induced an additional 10 to 17 per cent of BERD, which seems unlikely to be an overestimate, given that BERD increased by 70 per cent over the period. The tax concession was estimated to have stimulated between \$0.60 and \$1.00 of additional R&D spending per dollar of tax revenue foregone, an estimate which ranks in the middle of estimates on similar overseas schemes. The study also found that an additional 200 continuous R&D performing firms emerged in each of the first three years of the concession.⁶³⁷

A 1992 BIE survey found that the concession had been 'critical' to 23 per cent of respondents proceeding with at least one R&D project in the last 3 years. As shown below, the R&D concession also helped many firms to continue projects, improve their quality or widen their scope.⁶³⁸

⁶³⁵ Jenny Stewart, *The Lie of the Level Playing Field*, op. cit., p.38.

⁶³⁶ Industry Commission, *Research and Development*, op. cit., p.86.

⁶³⁷ Bureau of Industry Economics, *R&D, Innovation and Competitiveness*, op. cit., p.xi,103.

⁶³⁸ *ibid.*, p.92,94,96.

The Tax Concession and R&D Decision Making

Decision	No effect	Some effect	Significant effect	Very significant effect
To continue projects	25.1	31.1	25.7	18.1
To widen the scope of projects	24.8	31.1	27.0	17.1
To improve the quality of R&D	30.6	27.6	25.7	16.1
To focus more on development	33.3	26.7	24.8	15.2
To focus more on research	36.2	31.6	21.0	11.1

Source: Bureau of Industry Economics, *R&D and International Competitiveness*, op. cit., p.96.

In addition, the concession underwrote significant attitudinal change, which will improve R&D performance in the future. A 1989 BIE survey found that 58 per cent of respondents reported the concession had been important in encouraging a more favourable attitude to R&D, 51 per cent said it encouraged placing R&D more centrally in their business strategy, 34 per cent said it had improved R&D project management skills and 24 per cent said it lowered perceptions of the riskiness of R&D.⁶³⁹

The BIE study concluded that the concession was likely to have increased international competitiveness and been welfare enhancing, and clearly contributed to increased innovation by firms. It therefore recommended the retention of the R&D tax concession as a permanent feature of industry policy.⁶⁴⁰

The Labor Government also increased R&D by firms beyond that achievable by the market alone through the GIRD scheme. Established in 1986, GIRD provided support for R&D projects undertaken by industry both individually and in collaboration with publicly funded research bodies. Grants were made available for companies ineligible for the tax concession, exceptional projects or for pre-competitive strategic research into generic technologies.⁶⁴¹ GIRD brought considerable collaborative research on specific projects and the development of closer contact between scientists, engineers, universities and the CSIRO.⁶⁴² The grants schemes also appeared to induce R&D projects that would not otherwise have been undertaken. Such grants schemes have great potential because, if administered effectively, they can target projects with a high social payoff.⁶⁴³ However, the BIE's tax concession report argued that the effectiveness of the scheme had been limited because it was only receiving around \$14 million annually and numerous restrictions applied to receiving grants.⁶⁴⁴

⁶³⁹ *ibid.*, p.122,123.

⁶⁴⁰ *ibid.*, p.xi,185.

⁶⁴¹ Randal G. Stewart, ch.6 'Industry policy' in Christine Jennett & Randal G. Stewart (eds), *Hawke and Australian Public Policy: Consensus and Restructuring*, MacMillan, South Melbourne, Victoria, 1990, p.125.

⁶⁴² Philip Brass, *op. cit.*, pp.271-280 at p.276.

⁶⁴³ Industry Commission, *Research and Development*, *op. cit.*, p.30,32.

⁶⁴⁴ Bureau of Industry Economics, *R&D, Innovation and Competitiveness*, *op. cit.*, p.28,187,188.

The increase in R&D achieved in the period indicates that Labor's schemes to encourage BERD, including the CRC program to be discussed below, may have been successful. BERD increased, in constant 1996-97 dollars, from just over \$1 billion in 1984-85 to more than \$4 billion in 1995-96.⁶⁴⁵ Between 1988 and 1995, Australia's BERD to GDP ratio grew at nearly 10 per cent per year, which was the second fastest growth rate among OECD nations.⁶⁴⁶

The tax concession could be reformed to improve its capacity to foster increased R&D by business in a number of ways. The definition of eligible expenditures under the concession could be enlarged to include patent and licence work directly concerned with R&D projects, market research, testing and development, quality control, and making cosmetic or stylistic changes to products, processes and production techniques. Further, given the fast growth of both domestic and world exports in high value-added services, investment in innovation in services processes should be eligible under the concession.⁶⁴⁷ Further, given that the BIE survey found that 67.5 per cent of firms would increase their R&D expenditure if the Federal Government provided 200 per cent tax deductibility for eligible R&D expenditures, this measure could be considered.⁶⁴⁸ However, given that much of the concession moneys foregone support R&D expenditure that may have occurred anyway, it may be sensible to provide a 200 per cent concession, but only to expenditures above 25 or 50 per cent of the previous year's investment.

Reforms to the R&D grants program could also improve its effectiveness. The program could be largely focused on providing grants for R&D projects which are repayable upon successful commercialisation through a royalty or similar agreement.⁶⁴⁹ It may be useful to follow the IC view that non-repayable grants remain for companies in tax loss and for projects involving collaborative R&D, but repayable grants be introduced for closer to market R&D activities outside the scope of the tax concession. Repayable grant schemes are used widely overseas, and in nations such as Japan, Germany and Sweden, are the major form of support.⁶⁵⁰ A significant increase in funds could be made available under the cost recovery element of the grants program, thereby allowing many more firms to receive grants when they need them, without the cost of the scheme rising significantly. This accords with Porter's finding that high direct grants often bring unsatisfactory results because without having to bear financial risk, firms sometimes chose poor projects or don't manage them well.⁶⁵¹ The non-repayable grants component of the scheme should remain modest because: the administration costs, both for the Government and applicants,

⁶⁴⁵ Department of Industry, Science and Tourism, *Australian Science and Technology at a Glance 1997*, op. cit., p.22.

⁶⁴⁶ Figures calculated at my request by the Science and Technology Policy Branch, Department of Industry, Science and Tourism, August 1998.

⁶⁴⁷ LEK Partnership, op. cit., p.71,72.

⁶⁴⁸ Bureau of Industry Economics, *R&D, Innovation and Competitiveness*, op. cit., p.99.

⁶⁴⁹ Howard, John & Department of Industry, Science and Tourism, *Investing for Growth: the Howard Government's Plan for Australian Industry*, Department of Industry, Science and Tourism, Canberra, 1997, p.32,33 outlined the Government's new R&D Start initiative entitled R&D Start-Premium. Under this element of the program, the IR&D Board could provide assistance of up to 72 per cent of an R&D project's total cost, repayable upon successful commercialisation through a royalty or similar agreement.

⁶⁵⁰ Industry Commission, *Research and Development*, op. cit., p.32.

⁶⁵¹ Michael E. Porter, op. cit., p.632-635.

are high; the Government can pick bad projects; grants induce lobbying by firms; and assistance goes to a relatively small number of firms.⁶⁵²

The Federal Government must also ensure that significant generic, strategic basic and applied research is being undertaken in Australia's high growth, R&D intensive sectors. Such research can bring important advances in knowledge that can assist the whole sector to compete more effectively through innovation. Unfortunately, the public good nature of R&D can mean that firms are unwilling to undertake the R&D, instead hoping to free ride on that performed by others.⁶⁵³ Very few such sector-specific R&D institutions or networks have existed in Australia's manufacturing industry. As SMEs generally lack the time, expertise and resources to monitor the vast array of technological developments occurring across the globe, programs directed to establishing sector-based R&D arrangements can bring firms the capacity to benefit from R&D to an extent not achievable were they acting alone.⁶⁵⁴

Therefore, the Federal Government should consider working co-operatively with firms from Australia's fastest growing, R&D intensive sectors to organise the finance and capability to form institutions to conduct on-going R&D in areas potentially lucrative to many firms within the sector. Arrangements would need to be tailored to the needs of the sector. For some, key firms in a sector may wish to participate in one or more CRCs. Alternatively, some could follow the model of the rural R&D corporations and councils, which are funded by a levy on producers up to a maximum of 0.5 per cent of production, matched on a dollar for dollar basis by the Federal Government. Under these arrangements, producers vote on the level of the levy and the composition of the Board.⁶⁵⁵

The Government could also consider building up a significant national technology development infrastructure to assist manufacturers to undertake product and process innovation. Such facilities are generally provided overseas, but are gravely under-developed in Australia. However, in seeking to build up such infrastructure, any initiatives must not result in excessive fragmentation of existing infrastructure, or duplication of functions. Already, CRCs, higher education institutions and the CSIRO are playing a role in technology development. However, much of this work is generic, basic, long-term research and a significant proportion is not focused on the needs of industry. Given this situation, there does seem scope for the development of a national network of Advanced Manufacturing Technology Institutes (AMTIs). Their niche in the national research infrastructure would be to focus exclusively on close-to-market technology development with firms in the AMT area. They would be market and industry driven and focused on the core problems of individual firms.⁶⁵⁶ In combination with Australia's existing research infrastructure, AMTIs could

⁶⁵² Industry Commission, *Research and Development*, op. cit., p.31,32.

⁶⁵³ *ibid.*, p.167.

⁶⁵⁴ See Ian Chater and Michael Welbourne, Appendix Two: 'Australian inter-firm networks: An unrealised potential for technology up-take?' in Michael Welbourne, Martin Wardrop & Kevin Bryant, op. cit., pp.69-80.

⁶⁵⁵ The rural R&D corporations and councils are discussed in Industry Commission, *Research and Development*, op. cit., at p.37-39,187.

⁶⁵⁶ Michael Welbourne, Martin Wardrop & Kevin Bryant, op. cit., p.106.

provide the technology development infrastructure needed to help create a vibrant, internationally competitive ETM sector.

Supporting tax loss firms is also important to encouraging R&D by firms. To create an innovation driven economy, people must be encouraged to establish new businesses with the aim of commercialising their innovative ideas. However, converting ideas into lucrative products generally requires significant investment over several years, during which firms must often absorb significant losses. More support is needed for innovative start-up firms making losses because it is impossible for them to take advantage of the tax concession, yet such businesses are crucial to building an innovation-driven economy. A remedy for this problem would be to create a significant venture and development capital market. Policies to achieve this are discussed in chapter 13. Furthermore, the Government could provide tax loss companies with a non-taxable grant equal to the nominal value of a tax deduction of 50 per cent of the cost of undertaking R&D.⁶⁵⁷

As Stewart stresses, public purchasing and the contracting out of development work by government departments and authorities are important but much neglected methods of encouraging technological acquisition and development. Australian Governments could establish a significant client-supplier relationship with the manufacturing industry in order to encourage a greater R&D capability among indigenous firms.⁶⁵⁸

Stewart also points to the positive role played by offsets programs in encouraging R&D, production and exports in three key industries, namely aerospace, information technology and telecommunications.⁶⁵⁹ Labor's 'Partnerships for Development' program aimed to offset the massive imports of multinational companies in key global industries by establishing an agreement that by the seventh year, expenditure on R & D be equal to 5 per cent of its annual turnover, exports be 50 per cent of annual imports and exports include an average of 70 per cent local value-added.⁶⁶⁰ It may be that such partnership agreements could be revived to assist local firms to tap global networks in technologically significant industries,⁶⁶¹ offset imports and gain the sales revenue and experience necessary to undertake export drives in such sophisticated market segments.⁶⁶²

As the great majority of new technological knowledge is produced overseas, Governments can also improve innovation by providing grants to encourage collaboration between Australian researchers and industry and their counterparts overseas. Funds can support individual projects, bilateral relationships, overseas

⁶⁵⁷ Industry Commission, *Research and Development*, op. cit., p.33.

⁶⁵⁸ Jenny Stewart, *The Lie of the Level Playing Field*, op. cit., p.103,241,242.

⁶⁵⁹ *ibid.*, p.100.

⁶⁶⁰ Industry Commission, *Annual Report 1990-91*, Australian Government Publishing Service, Canberra, 1991, p.145,146.

⁶⁶¹ Pappas, Carter, Evans & Koop/Telesis, op. cit., p.178-180.

⁶⁶² Jenny Stewart, *The Lie of the Level Playing Field*, op. cit., p.252,254.

visits, exchange programs, conferences and access for Australian researchers to major research facilities unavailable in Australia.⁶⁶³

Public Research Institutions and the Needs of Industry

Traditionally, Australian industry and public researchers have not, in general, co-operated effectively, and have therefore foregone the opportunity to create wealth through innovation. This section outlines measures that could produce effective co-operation, firstly, through reforms of CRCs, the CSIRO and higher education research and secondly, through various supporting measures. Labor's achievements in these areas will be detailed. They comprise evidence of the important role governments can play in fostering an innovation-driven economy.

The key theme of the proposals is that for nations to achieve national competitive advantage, public research bodies must focus strongly on meeting the needs of industry, particularly by establishing strong, productive links with firms and concentrating on commercially relevant research.⁶⁶⁴ Governments in strong R&D performing industrialised nations have aligned their large publicly funded research institutes with the needs of business through co-operative arrangements.⁶⁶⁵ By contrast, only around 40 per cent of expenditure by Australia's public research institutions is directed to economic development.⁶⁶⁶ This needs to increase if Australia is to create a competitive, innovation-based economy. In particular, public research agencies need to increase their focus on fostering Australia's emerging high growth, SME exporters in the ETM sector. While manufacturing firms do the bulk of business R&D, only around 13 per cent of Commonwealth funding for research agencies is focused on manufacturing and State programs are almost totally devoted to agriculture.⁶⁶⁷

A second and related key theme of the proposals is that the Federal Government should give greater relative weight to applied research and experimental development because such research creates product and process innovation, and in turn, jobs and exports. By international standards, Australia has a high ratio of basic to applied research and does a relatively small amount of experimental development as a proportion of R&D expenditure. Only one-third of Australia's R&D expenditure is on experimental development, compared with more than one half in nations such as the United States, Sweden and Japan.⁶⁶⁸ At present, Australia produces much important basic research, but commercialises too little of it. Undertaking research in areas in which Australia lacks production capacity leads to publicly funded ideas being exploited offshore to the benefit of Australia's competitors. Government

⁶⁶³ Department of Industry, Science and Tourism, *Annual Report 1995-96*, Australian Government Publishing Service, Canberra, 1996, p.74 notes that \$5.6 million was devoted to such activities in 1995-96.

⁶⁶⁴ Michael E. Porter, *op. cit.*, p.632,633. A similar point is made in Jenny Stewart, *The Lie of the Level Playing Field*, *op. cit.*, p.130,131.

⁶⁶⁵ Jenny Stewart, *The Lie of the Level Playing Field*, *op. cit.*, p.38.

⁶⁶⁶ Industry Commission, *Research and Development*, *op. cit.*, p.82.

⁶⁶⁷ *ibid.*, p.88.

⁶⁶⁸ *ibid.*, p.7,109.

should therefore increase the focus of Australia's research infrastructure on closer-to-market research aimed at creating new products and processes.

However, this increased focus on applied research and experimental development should not be achieved through a reduction in Australia's commitment to strategic basic research in absolute terms. Public research institutions can make an important contribution to the innovation capacity of industry by focusing on commercially relevant strategic basic research that would not otherwise be performed and disseminating the new knowledge throughout the economy at low cost.⁶⁶⁹ Strategic basic research is vital because: it brings advances in knowledge in broad areas that can be used by firms to undertake more specific, commercially focused innovation; and it forms the major training ground for future researchers.⁶⁷⁰ Any savings required should be made in pure basic research. In a society with significant social and economic problems, research undertaken without any practical outcome in mind should be accorded a lower priority than research that can contribute to positive economic, social or environmental change.

Porter's research showed that one of the most successful methods of encouraging strong links between research institutions and industry has been to establish a range of specialised research institutes focused on industry clusters or transformative technologies. Porter wrote: 'One of the strongest findings from our research is the frequency with which internationally leading national industries are associated with specialised research institutes or university departments, often located in close proximity.'⁶⁷¹ Porter emphasised that universities in particular can assist in encouraging industry R&D because: newly trained scientists are likely to focus research on new technologies; research diffuses well in an open university setting; and, formation of innovative new businesses is encouraged as students and/or staff commercialise their ideas.⁶⁷²

Labor began the process of building productive linkages between researchers and firms through their CRC program, which led to the establishment of 61 CRCs over 4 selection rounds between 1991 and 1994. Each centre had to have at least one higher education institution as a core partner and half have two or more, the CSIRO are participants in 52 of the 61 CRCs and more than 200 companies were involved as at December 1994. Participants are required to provide at least 50 per cent of the resources for a CRC through cash or in-kind contributions over 7 years. Overall, resources valued at over \$2.7 billion were committed over the life of the 61 CRCs, of which the Labor Government committed nearly \$850 million. The program was commenced following research showing the successful operation of similar programs in a range of OECD nations.⁶⁷³

⁶⁶⁹ *ibid.*, p.71.

⁶⁷⁰ Department of Employment, Education and Training, *Committee to Review Higher Education Research Policy*, *op. cit.*, p.39.

⁶⁷¹ Michael E. Porter, *op. cit.*, p.633.

⁶⁷² Michael E. Porter, *op. cit.*, p.632.

⁶⁷³ Industry Commission, *Research and Development*, *op. cit.*, p.42,831,832,840-841,844.

The CRC program has helped to re-orient Australia's public research effort towards the needs of industry because participating firms have input into the type of research undertaken and partly fund the research. In this way, CRCs have produced much high quality, long-term strategic research of significance to Australian industry. Because research is generally focused on industry needs, innovative ideas are more often used by Australian companies to produce closer-to-market research directed at producing innovative products.⁶⁷⁴ CRCs also encourage innovation by firms by signalling to them the importance of emerging technical areas. Commercialisation is improved because participating firms are often given the first right of refusal to CRC intellectual property. The program has also improved the capacity of researchers to meet the needs of industry by giving researchers experience in major co-operative, user oriented research programs, facilitating research training and enabling the formation of high quality research teams across several States and among numerous public and private organisations.⁶⁷⁵

As the 1995 review by the CRC Evaluation Steering Committee concluded, the program has improved co-operation between higher education institutions, government research agencies and industries, creating linkages that had previously not existed.⁶⁷⁶ In particular, it has promoted effective linkages between manufacturers and researchers, which has for a long time been a deficiency in the national innovation system (in contrast to the long standing and effective linkages between researchers and firms in mining and agriculture). Most of the research centres focus on manufacturing.⁶⁷⁷ The program may have also improved the quality of the linkages between industry and researchers. CRC linkages are long-term, underpinned by a legal framework, formal management and strategic planning and budgeting and involve at least a critical mass of researchers and end users. By contrast, linkages outside CRCs tend to involve only a limited number of researchers and be short-term, project specific and informal.⁶⁷⁸

Importantly, the CRC program has also facilitated further investment in R&D by industry. By late 1995, the CRCs had levered \$400 million dollars worth of industry investment in R&D.⁶⁷⁹ The success of these centres is an example of how government can foster an innovation-driven economy. The program could usefully be expanded,⁶⁸⁰ particularly as researchers could still play a much greater role in helping industry to innovate.

⁶⁷⁴ Philip Yetton, Jeremy Davis & Peter Swan, *Going International*, op. cit., p.77.

⁶⁷⁵ Industry Commission, *Research and Development*, op. cit., p.833,835.

⁶⁷⁶ Department of Industry, Science and Tourism, *Annual Report 1995-96*, op. cit., p.72.

⁶⁷⁷ Industry Commission, *Research and Development*, op. cit., p.831 notes that the centres are focused on manufacturing technology (9 centres), information and communication technology (8 centres), agriculture and rural based manufacturing (15 centres), environment (12 centres), medical science and technology (8 centres) and mining and energy (9 centres).

⁶⁷⁸ Industry Commission, *Research and Development*, op. cit., p.852.

⁶⁷⁹ Peter Cook, Minister for Industry, Science and Technology, *Putting Ideas to Work for Australia - Address to the Industry Launch of the Innovation Package at the Regent Hotel, Melbourne, 7 December 1995*, Unpublished, 1995, p.6.

⁶⁸⁰ Philip Yetton, Jeremy Davis & Peter Swan, op. cit., p.77.

The CRC program could also be improved. There is evidence that some CRCs are not meeting industry needs. Some participating firms have complained that they lack the capacity to influence research objectives and that the focus of research is more on the interests of researchers than on potentially lucrative research. It is vital that industry has sufficient capacity to influence the research undertaken by CRCs to ensure the research is commercially focused.⁶⁸¹ To this end, the Government could encourage more use of methods already established to encourage industry involvement in CRCs, such as participation by industry research groups and industry associations, as well as rural R&D corporations. Six CRCs have 'industry associate or affiliate' categories which, for an annual fee, enable firms access to research information and the CRC's research staff, and enable the firms to have input into the CRC's research agenda.⁶⁸² These innovative methods of facilitating industry involvement could be extended.

The Federal Government also needs to ensure that there is an appropriate balance within CRCs between long-term, generic, strategic basic and applied research on the one hand, and closer-to-market research directed at commercialisation on the other. The IC has criticised the fact that under the program, there has been an increasing emphasis on near-to-market research and commercialisation activities. In some CRCs, research has gone beyond simply generic research to include consultancy services. The IC believes that orienting the program towards producing research of benefit to participating firms, rather than research of generic benefit to a broad cross-section of industry, undermines the public good rationale for government funding of the program.⁶⁸³ It is important that a majority of research performed in CRCs is directed at issues of importance to firms throughout the sector.

However, CRCs should also be encouraged to provide consultancy services to firms involving near to market research aimed at producing commercial benefit from the more basic knowledge advances produced by the CRCs. Australia has a long standing deficiency in commercialising its research. Where CRCs produce research that is commercialised by participant firms, they are remedying a long standing weakness in the Australian economy and improving our capacity to compete on the basis of innovation. Therefore, such activity should be encouraged, not frowned upon. However, as such research involves fewer spill-over benefits, it should comprise only a significant minority of the CRC's work and occur on a cost recovery basis.

While the CRC program is a major initiative, the Government could do more to focus the higher education sector on assisting firms to innovate. The Government could set national research priorities that would be considered by the ARC in assessing applications for grants.⁶⁸⁴ The priorities would ensure that a large percentage of funds

⁶⁸¹ Industry Commission, *Research and Development*, op. cit., p.862.

⁶⁸² *ibid.*, p.841.

⁶⁸³ Industry Commission, *Research and Development*, op. cit., p.853-855.

⁶⁸⁴ Higher Education Financing and Policy Review Committee, *Learning for Life: Review of Higher Education Financing and Policy: A Discussion Paper*, Australian Government Publishing Service, Canberra, 1997, p.38; and Department of Employment, Education and Training & John Dawkins, *Higher Education: A Policy Statement*, Australian Government Publishing Service, Canberra, 1988, p.94.

were directed to achieving firstly, an economy capable of continuous innovation and secondly, the restructuring needed in the Australian economy, namely toward ETMs and high value-added services.⁶⁸⁵ Priority would be given to those fields crucial to establishing an innovation-based economy, such as engineering, science, business and management. Further, in a world with massive social and economic problems, research not directed to achieving practical economic or social progress should not be funded.⁶⁸⁶

The quality of research could be improved by further concentrating resources in institutions of research excellence. Research policy should be directed to establishing and maintaining several centres of research excellence in each field nationally, rather than having most tertiary institutions each providing merely adequate quality in virtually all fields of study. To achieve this, a greater percentage of research funding could be provided on a competitive basis, a trend begun by the Hawke Government in the late 1980s. Only those faculties with demonstrated capacity for world class research would receive this component of research funding.⁶⁸⁷ To further improve research quality, some academic appointments could focus largely on teaching, with a research component sufficient only to maintain reasonable subject knowledge.⁶⁸⁸

Greater funding could be provided for research infrastructure. DEET reported in 1989 that there was a serious deficiency in infrastructure support for research, research training and teaching. Much of the research equipment, particularly in science, was obsolete, meaning that graduates often lacked the knowledge to effectively operate new technology and equipment. In turn, this deficiency in equipment based training impeded the take-up of technology.⁶⁸⁹ Funding since that time has been insufficient to produce world class research infrastructure.

The research performance of universities would also be improved if research careers were made more attractive. Many factors discourage Australia's brightest people from becoming researchers, including an inadequate career structure, too few permanent positions and low wage levels relative to what people can earn with comparable qualifications in other fields. DEET warned in 1989 that there was an urgent need to attract more Australian students into research, particularly in engineering and applied sciences, to avoid restricting Australia's international competitiveness.⁶⁹⁰

⁶⁸⁵ Department of Employment, Education and Training & John Dawkins, *op. cit.*, p.9 argued that a greater percentage of grants handed out by the Australian Research Council (ARC) should be given to projects aimed at achieving commercial rewards.

⁶⁸⁶ Department of Employment, Education and Training & John Dawkins, *op. cit.*, p.90 stated: '...the Government seeks to promote greater responsiveness of the higher education research effort to the needs of the society and economy which support it.'

⁶⁸⁷ This was the thrust of the policy suggested in Department of Employment, Education and Training & John Dawkins, *op. cit.*, at p.28,92-94. This Statement announced that over the 1989-91 triennium, \$65 million was redirected from recurrent grants to universities to competitive research schemes with the aim of maximising the quality of the national research effort and directing the research effort to national priorities.

⁶⁸⁸ Higher Education Financing and Policy Review Committee, *op. cit.*, p.38.

⁶⁸⁹ Department of Employment, Education and Training, *Committee to Review Higher Education Research Policy*, *op. cit.*, p.20,22,23,41,42.

⁶⁹⁰ *ibid.*, p.21,24,25.

To attract students to a research career, the Government could: increase the number of academic positions available; expand the number of postgraduate research scholarships and increase the amount paid under scholarships; make all research training, including part-time research training, HECS exempt; establish a greater number of renewable, five-year career fellowships; establish attractive career structures in research;⁶⁹¹ and improve remuneration.

To further improve the interaction between higher education researchers and industry, the Government could encourage the growth of the commercial arms in universities, which sprang up in the 1980s. These bodies can harness the research capacity of universities for the benefit of industry.

The Government should also maintain healthy funding for higher education research more generally. It is important to establishing an innovative economy because universities: undertake some research of benefit to industry; pass on to graduates the knowledge and skills necessary to contributing to the economy; and, through their research programs, prepare the next generation of researchers to enter the system.⁶⁹² The movement of university graduates and trained researchers is an important mechanism for the diffusion of knowledge throughout the economy.⁶⁹³ Labor made a considerable contribution to diffusion of knowledge in this way. Between 1984-85 and 1994-95, the number of R&D personnel in the Australian economy rose from 51,254 to 86,162, with the numbers in higher education rising from 20,844 to 40,096 over the same period.⁶⁹⁴

The CSIRO is Australia's largest research organisation (attracting planned budget outlays of around \$450 million in 1995-96) and has a long history of achievement.⁶⁹⁵ However, while the CSIRO has a legitimate role in conducting research into a wide range of disciplines, there appears scope it to concentrate more on research of direct benefit to industry.⁶⁹⁶ This should take two forms.

Firstly, the key task of the CSIRO should be to undertake research of a strategic and applied nature aimed at producing important generic knowledge which can then be exploited by firms undertaking closer-to-market R&D aimed at specific commercial applications. This generic, public good research should also be focused more strongly on those sectors crucial to establishing an innovation-driven economy, namely ETMs and sophisticated services.

Secondly, the CSIRO should continue to play a secondary role in undertaking contract work with firms. Such work is important because it helps focus the work of

⁶⁹¹ These measures are recommended in Department of Employment, Education and Training, *Committee to Review Higher Education Research Policy*, op. cit., p.25,31.

⁶⁹² Department of Employment, Education and Training, *Committee to Review Higher Education Research Policy*, op. cit., p.19; and Industry Commission, *Research and Development*, op. cit., p.70.

⁶⁹³ Industry Commission, *Research and Development*, op. cit., p.117.

⁶⁹⁴ Department of Industry, Science and Tourism, *Australian Science and Technology at a Glance 1997*, op. cit., p.8.

⁶⁹⁵ Industry Commission, *Research and Development*, op. cit., p.80.

⁶⁹⁶ Randal G. Stewart, ch.6 'Industry Policy' in Christine Jennett & Randal G. Stewart (eds), *Hawke and Australian Public Policy*, op. cit., p.126,127.

the CSIRO on assisting firms to achieve competitive advantage through innovation.⁶⁹⁷ This work was sensibly encouraged by Labor's decision to require that the CSIRO raise 30 per cent of its funds from outside sources. The McKinsey report noted that this reform prompted the CSIRO to seek out leading edge firms with which to conduct joint research that could benefit Australian industry. McKinsey argued that this reform be continued and other funding incentives be applied to encourage a greater business focus from the CSIRO.⁶⁹⁸

However, the CSIRO's contract work has been too focused on large firms, particularly multinationals, and has often involved research that no Australian firm could commercialise.⁶⁹⁹ Through direction and by subsidising a helpful minority of the cost of research contracts, the Government could ensure that the vast majority of contract work is done for Australian firms, with particular attention given to SMEs creating ETMs and sophisticated services.⁷⁰⁰

A number of supporting measures could be established to further encourage productive co-operation between researchers and industry. The Government could seek to foster a culture in which business leaders and managers have an affinity for, and experience with, technology, innovation and/or scientific or engineering training. To do this, tertiary courses could be reformed to ensure that science and technology students could acquire business skills and an understanding of commercial innovation, while business students were given an understanding of the importance of innovation to economic development.⁷⁰¹

The Government could usefully encourage greater interchange between public researchers and industry through secondment schemes,⁷⁰² given the importance of human carriers to the innovation diffusion process. A McKinsey study showed that half the SMEs surveyed said they would value highly the opportunity to have CSIRO technicians seconded to their company and 40 per cent would highly value seconding their staff to CSIRO laboratories. Virtually all successful cases of SMEs collaborating with CSIRO have involved secondments.⁷⁰³

The Government could also consider catalytic action to produce an information market that linked researchers in particular fields with firms in the same area. At present in Australia there is no genuine market for R&D ideas. Many firms have challenges that scientists could overcome, but gaining access to each other is slow

⁶⁹⁷ Michael E. Porter, *op. cit.*, p.633 recommends significant use of research contracts between government research institutions and industry because they introduce market disciplines and facilitate better co-operation.

⁶⁹⁸ Australian Manufacturing Council Secretariat & McKinsey and Company, *op. cit.*, p.35-37.

⁶⁹⁹ Jenny Stewart, *The Lie of the Level Playing Field*, *op. cit.*, p.104.

⁷⁰⁰ Michael E. Porter, *op. cit.*, p.633 recommends that research contracts be encouraged and that Government could provide matching funding or otherwise underwrite the cost.

⁷⁰¹ Australian Manufacturing Council Secretariat & McKinsey and Company, *op. cit.*, p.35; and Department of Employment, Education and Training, *Committee to Review Higher Education Research Policy*, *op. cit.*, p.34.

⁷⁰² Department of Employment, Education and Training, *Committee to Review Higher Education Research Policy*, *op. cit.*, p.33.

⁷⁰³ Australian Manufacturing Council Secretariat & McKinsey and Company, *op. cit.*, p.35.

and difficult. There is no integrated system to link ideas and opportunities.⁷⁰⁴ One method of improving the links is to follow the lead of the University of California, which has developed the 'Access Model', which includes information on technology available for licensing in universities and federally funded research programs in progress and the capabilities of more than 39,000 high tech corporations in California. Firms are able to match their activities with the activities of either technology providers or the firms that may be able to use the technology that they have developed.⁷⁰⁵

Finally, Australia's ability to compete on the basis of innovation will rest crucially on reforms to achieve excellence in the remaining areas of the innovation chain. Only when Australia achieves competence in activities throughout the innovation chain will we be able to fully capitalise on the wave of innovative ideas emerging from the national R&D infrastructure.

⁷⁰⁴ *ibid.*, p.36.

⁷⁰⁵ McKinsey and Company & the Australian Manufacturing Council Secretariat, *op. cit.*, p.55,56.

Chapter Nine: Technology Diffusion

The previous chapter focused on R&D and therefore covered the *development* of new products and processes. This chapter is focused on the *diffusion* of key technologies, including both their up-take and effective application by firms. Of course, the two topics are highly inter-related and success in one is highly dependent on success in the other. For example, an in-house R&D capability can assist a firm to understand the importance of technology, monitor technological developments and take-up appropriate technologies.⁷⁰⁶ Further, while the up-take of some technology can require relatively little effort, in other cases, applying technology to production processes or to creating new products can involve significant R&D. As they are part of the same process, the distinction between technology up-take and technology development can become blurred. R&D is important to technological up-take and R&D policies assist firms with technology up-take, as well as with technology development. However, this chapter has been included because specific technology diffusion policies can augment the capacity of firms to take-up and exploit new technology, beyond that achievable by R&D policies alone.

1. The Importance of Technology Diffusion to Competitive Advantage Based on Innovation

Rapid diffusion of key technologies is crucial to achieving competitive advantage based on innovation because we are living in an era in which transformative technologies are facilitating improved competitiveness for firms throughout the economy by creating new opportunities for product and process innovation.⁷⁰⁷ For example, information technology, most particularly word processing, electronic mail and the Internet, have revolutionised processes throughout the economy and greatly added to the capacity of many firms to create new products. Key transformative technologies include microelectronics, biotechnology, the new materials-science industries, telecommunications, civilian aviation, robotics plus machine-tools and computers plus software.⁷⁰⁸ Such sectors are also important because they are rapidly spawning new products and growing quickly themselves. Thus, those nations that are among the first to master and widely diffuse transformative technologies can create a surge in competitive advantage, firstly, through innovation in these sectors themselves, and secondly, by transforming and upgrading products and processes in traditional industries throughout the economy.⁷⁰⁹

In this way, technological advance is a key driver of economic growth. Fagerberg's 1988 study of OECD nations showed that technological capability was a far more important explanation of differences in the growth of GDP and market shares than

⁷⁰⁶ Michael Welbourn, Martin Wardrop & Kevin Bryant, op. cit., p.15,21,31.

⁷⁰⁷ Stephen S. Cohen & John Zysman, *Manufacturing Matters*, op. cit., p.240.

⁷⁰⁸ Lester Thurow, *Head to Head*, op. cit., p.30.

⁷⁰⁹ Stephen S. Cohen & John Zysman, op. cit., p.220,227; and Giovanni Dosi, Laura D'Andrea Tyson & John Zysman, ch.1 "Trade, technologies, and development: A framework for discussing Japan" in Chalmers Johnson, Laura D'Andrea Tyson & John Zysman (eds), *Politics and Productivity: The Real Story of Why Japan Works*, Ballinger Publishing Company, Cambridge, Massachusetts, USA, 1989, p.31,32.

cost competitiveness.⁷¹⁰ Porter's study also found that: '...technological change...accounts for much of economic growth.'⁷¹¹ Not surprisingly, studies show that the general economic benefits from technology up-take substantially outweigh even the direct economic benefits of R&D and its commercialisation.⁷¹² The 1994 White Paper on Employment stated that: 'It is estimated that the economic benefits of diffusion of technology exceed those of research and development by two to one.'⁷¹³

By driving growth and innovation, technological change also drives restructuring. In particular, in the technology intensive sectors on which Australia's economic future depends, firms with a substantial in-house technology capacity are best placed to succeed.⁷¹⁴ The McKinsey report stressed that technology was a key to competitive advantage for ETM exporters because it enables firms to: establish unique manufacturing processes; produce unique products; achieve continuous product innovation; and tailor existing products to meet the needs of specific export markets.⁷¹⁵ Almost 40 per cent of Australia's emerging ETM exporters attribute their competitive advantage to technology. Of those receiving the 150 per cent R&D tax concession, those with the highest technological innovation averaged growth rates of 16 per cent annually, while those with the lowest technological innovation had growth rates of only 8 per cent.⁷¹⁶

In particular, advanced manufacturing technology (AMT) is vital to competing on the basis of innovation. Computer-aided manufacturing and flexible manufacturing systems enable firms to do short production runs economically, and thereby facilitate the continual refinement of products to meet changing consumer demands.⁷¹⁷ The KPMG Peat Marwick Survey has shown the importance of AMT to improving quality, increasing labour productivity, reducing delivery lead times, cutting inventories, improving profits and sales volumes, reducing overheads and cutting the time needed to introduce new products.⁷¹⁸ Thus, adoption of AMT is vital to achieving a competitive advantage in ETMs.⁷¹⁹

Technology has also nullified the importance of factors of production that were once significant, particularly natural resources and labour costs. Advanced materials are often made from cheap and ubiquitous resources. In advanced sectors, advanced manufacturing technology is now a far more important determinant of the location of production than low labour costs. This was shown in the 1980s when many plants moved to high labour cost locations to be close to markets, rather than the reverse.⁷²⁰

⁷¹⁰ Anand Kulkarni, *op. cit.*, p.359.

⁷¹¹ Michael E. Porter, *op. cit.*, p.20.

⁷¹² Michael Welbourne, Martin Wardrop & Kevin Bryant, *op. cit.*, p.15.

⁷¹³ *Working Nation: Policies and Programs*, Australian Government Publishing Service, Canberra, 1994, p.65.

⁷¹⁴ Michael Welbourne, Martin Wardrop & Kevin Bryant, *op. cit.*, p.101.

⁷¹⁵ McKinsey and Company & the Australian Manufacturing Council Secretariat, *op. cit.*, p.20,21.

⁷¹⁶ Australian Manufacturing Council Secretariat & McKinsey and Company, *op. cit.*, p.31,32.

⁷¹⁷ Industry Commission, *Research and Development*, *op. cit.*, p.135.

⁷¹⁸ KPMG Peat Marwick, *1993 Manufacturing Survey*, KPMG, Sydney, 1993, p.13,14.

⁷¹⁹ Michael Welbourne, Martin Wardrop & Kevin Bryant, *op. cit.*, p.102.

⁷²⁰ Michael E. Porter, *op. cit.*, p.13,14.

Technological change also drives organisational improvement. The introduction of technology generally requires work reorganisation, changes to management processes and investment in training so that staff can reap maximum economic rewards from the technology. This can result in improved organisational performance. For example, computers have brought quality and productivity improvements by facilitating the devolution of responsibility and authority downward, employee multiskilling and flatter structures.⁷²¹

Technological change is also increasingly facilitating a global orientation among firms, thereby providing the opportunity to sell to huge markets across the globe, rather than simply to Australia's small domestic market. These opportunities have been facilitated by new communications technologies such as the facsimile,⁷²² e-mail, the Internet and on-line and tele-conferencing facilities.

2. Market Failure and Australia's Weaknesses in the Diffusion of Technology

The process of acquiring and exploiting technologies is subject to massive market failure. Studies have shown that: it can take 20-30 years after the initial adoption for a major new innovation to be taken up by the great majority of firms in an industry; and the rate of adoption can differ markedly between nations.⁷²³ Therefore, nations in which governments foster the up-take of transformative technologies can achieve increased competitiveness, relative to nations with minimal or ineffective technology policies.

Markets fail to produce the optimal amount of technology diffusion due to: lack of appropriability of the benefits by firms and the existence of spillovers; the risk and uncertainty about the results to be gained from technology up-take; the inability of firms, particularly small ones, to realise scale economies or make the minimum investment necessary for adoption; and the lack of access by firms to information about relevant technologies and how to exploit them. To keep abreast of technological advances occurring across the globe requires a major research capacity. Managers may lack the time, resources and skills necessary. For these reasons, relying on the market alone to diffuse technology will lead to sub-optimal outcomes.⁷²⁴

Numerous studies have shown that the up-take of technology by most Australian manufacturers is unsatisfactory and the performance of Australian manufacturers lags behind overseas competitors by a substantial margin.⁷²⁵ At 1991, only 41 per cent of Australian manufacturers with 10 or more employees had incorporated one or

⁷²¹ Michael Welbourne, Martin Wardrop & Kevin Bryant, *op. cit.*, p.1,2,23.

⁷²² *ibid.*, p.2.

⁷²³ *ibid.*, p.15,16.

⁷²⁴ *ibid.*, p.23-24. The first two reasons for market failure in technology investment are also outlined in Stephen S. Cohen & John Zysman, *op. cit.*, p.224,225.

⁷²⁵ KPMG Peat Marwick, *op. cit.*, p.13; and Michael Welbourne, Martin Wardrop & Kevin Bryant, *op. cit.*, p.41,98,99.

more pieces of AMT into their manufacturing process.⁷²⁶ Among all businesses in the manufacturing industry, only 24 per cent acquired any of a broad array of AMT surveyed between 1 July 1994 and 31 June 1997 and only a further 14 per cent were currently installing AMT or planned to over the next two years.⁷²⁷ After 12 years in office, Labor wrote in its White Paper that '...the take-up of new technology by Australian industry, in general, lags three to eight years behind our competitors.'⁷²⁸

Smaller firms have a particularly low rate of technology up-take. A 1994 DIST report found that approximately 30 per cent of medium sized firms and 65 per cent of small firms report no use of production process technology. Total technology use among small firms was minimal.⁷²⁹

Many Australian firms do not understand the advantages of using new technology. The 1994 DIST report noted that around 50 per cent of Australian businesses have neither acquired technology nor plan to acquire it in the next five years. Only a small minority of firms appear to have a comprehensive understanding of the importance of technology to their performance.⁷³⁰

Australian managers generally lack the knowledge and skill to identify and choose between technology options. Given their lack of resources and the large investment needed for effective technology management, small firms generally need to be in networks with other firms to maintain an effective technology strategy. Unfortunately, many Australian firms remain reluctant to co-operate with other firms. As such, many firms are largely unaware of technology developments, use out-of-date technology and under-invest in technology.⁷³¹

Even where firms do take-up technology, managers and workers often lack the knowledge and skill to adapt and exploit it to its maximum advantage. Where technology is purchased, it is often not focused on improving the core operations of a firm.⁷³² This is alarming because it is through adaptation of technology to a firm's core activities that major product and process innovations can be created.

3. Rationalism and Technology Diffusion

Hardline rationalism also fails to address technological change. Incredibly, while technological change is acknowledged as a driving force behind growth, technological change is exogenous to rationalist economic models and barely mentioned in rationalist discourse. The standard neoclassical model does not include any theory about how and why technological change occurs. Consequently, in the model, technological change can not be affected by any form of economic activity

⁷²⁶ Michael Welbourne, Martin Wardrop & Kevin Bryant, *op. cit.*, p.26.

⁷²⁷ Australian Bureau of Statistics, *Innovation in Manufacturing 1996-97*, Cat. no.8116.0, p.21.

⁷²⁸ *Working Nation: Policies and Programs*, *op. cit.*, p.65.

⁷²⁹ Michael Welbourne, Martin Wardrop & Kevin Bryant, *op. cit.*, p.101.

⁷³⁰ *ibid.*, p.98.

⁷³¹ *ibid.*, p.24,32,41,100.

⁷³² *ibid.*, p.41,100.

such as increased investment or government policy.⁷³³ As the BIE conclude: 'The fact that the standard model does not provide any explanation of what influences ...[technological advancement], the most important factor determining growth, is widely considered to make the model most unsatisfactory...'⁷³⁴ While rationalists could argue that they don't agree with all the assumptions of the standard neoclassical model, their failure to advocate active industry policy (including programs to foster the creation and diffusion of technology) are outcomes that flow from the 'logic' of the standard neoclassical model.

The Labor Government's approach to technology policy has been barely more positive than this hardline rationalist approach.⁷³⁵ Under Labor, Australia had no *substantial* programs explicitly and exclusively directed to encouraging the up-take of technology. Where programs existed, they were too small to be effective, rudimentary, and insufficiently focused on industry needs. The name, nature and purpose of the programs have often been obscure and confusing to firms.⁷³⁶ The relative neglect of technology diffusion by the Labor Government, by comparison with its support for technology development, was a serious policy error, given the economic benefits that can ensue from the widespread application of new technology.

Partly as a result of this rationalist neglect of technology policy, Australia does not have major, co-ordinated national facilities for manufacturing technology development, in contrast to many OECD and emerging Asian nations.⁷³⁷ As the Labor Government wrote after more than a decade in power: '...the existing infrastructure for technology diffusion is fragmented, lacks critical mass and is poorly performing in terms of meeting industry requirements.'⁷³⁸ Australia's weakness in technology diffusion is a key impediment to creating an innovation-driven economy and to restructuring to innovation-intensive manufactures and services, yet rationalism prescribes that governments pay little attention the issue of technological change.

4. Industry Policies to Foster Excellence in Technology Diffusion

Given that the process of acquiring and effectively deploying transformative technologies throughout the economy can take decades, there is major scope for government policies to foster the diffusion of technology and so increase the rate of innovation, restructuring and growth beyond that achievable by the market alone.

⁷³³ Bureau of Industry Economics, *Recent Developments in the Theory of Economic Growth*, op. cit., p.8; Metal Trades Unions, op. cit., 1984, p.56; and Peter Ewer, Winton Higgins & Annette Stevens, op. cit., p.56,57,106,107.

⁷³⁴ Bureau of Industry Economics, *Recent Developments in the Theory of Economic Growth*, op. cit., p.8.

⁷³⁵ Jenny Stewart, 'Still the need to overcome inertia', *The Weekend Australian*, 5 May 1994, p.16 argued that: 'The White Paper contains some modest initiatives to promote technology diffusion and to support commercialisation of new products by smaller firms... But there is little evidence here that the Government has begun to grapple in any serious way with developing a technology strategy...'

⁷³⁶ Michael Welbourne, Martin Wardrop & Kevin Bryant, op. cit., p.44,45.

⁷³⁷ *ibid.*, p.106.

⁷³⁸ *Working Nation: Policies and Programs*, op. cit., p.65.

Technology diffusion policy must ensure that firms can not only take-up technology, but also deploy it to their maximum advantage. Much of the benefit from technology comes from its effective application by firms. Some have argued that the key reason for the Japanese miracle was not so much technology development as their capacity to use borrowed technology to create new and better products.⁷³⁹ Unfortunately, in Australia, firms that have acquired technology have often been unable to benefit substantially due to a lack of skill in applying it. Therefore, effective exploitation of new technology is an important component of technology diffusion policy.⁷⁴⁰ In many cases, technology diffusion policy must therefore feed back into R&D policy.

Technology diffusion policy should have two key foci. Firstly, it should target transformative technologies. Research and knowledge spillovers are likely to be higher than average among those technologies with applications in numerous industries.⁷⁴¹

Secondly, technology diffusion policy should focus on technologies of crucial relevance to key sectors. Technology policy is vital to restructuring because the technologies that we focus on are important determinants of the sectors in which we can compete. In turn, this is a major determinant of our growth and living standards. For example, Japan's dominance of world markets in numerous ETM sectors has been underwritten by active government policies to foster generic technologies in the manufacturing and advanced electronics area and through ambitious policies to diffuse numerically controlled machine tools and robots among small producers who would otherwise be slow to adopt such technology.⁷⁴² By contrast, Australia's greater relative investment in research in unprocessed commodities, which are declining areas of world trade, has been a factor in our substantially poorer economic performance. Thus, decisions on which technologies a nation will specialise, are critical in determining the nation's industry structure, competitiveness and growth.

Technology diffusion policy should therefore focus on the technology needs of ETMs and sophisticated services. These sectors are dependent for their competitiveness on technology and, as a consequence, will produce a higher rate of technological advance and diffusion than other sectors. In particular, government policy should target the diffusion of those advanced manufacturing technologies vital to creating competitive advantage in ETMs.

To target transformative technologies and the technologies of key sectors, the Federal Government could also establish a Centres for the Diffusion of Key Technologies and Best Practice Program, based on overseas programs where national networks provide technology advisory services to firms at a local level.⁷⁴³ A comprehensive

⁷³⁹ Lee D. Dahringer & Hans Muhlbacher, op. cit., p.15.

⁷⁴⁰ Michael Welbourne, Martin Wardrop & Kevin Bryant, op. cit., p.22,25.

⁷⁴¹ Bureau of Industry Economics, *R&D, Innovation and Competitiveness*, op. cit., p.19. Michael E. Porter, op. cit., p.631 concludes that targeting widely applicable technologies is a key to effective science and technology policy.

⁷⁴² Stephen S. Cohen & John Zysman, op. cit., p.225.

⁷⁴³ Michael Welbourne, Martin Wardrop & Kevin Bryant, op. cit., p.36.

network of centres throughout Australia could help firms to take-up and exploit new technologies in two key ways.

Firstly, the centres could provide to firms advice and information, education and training, and referral to bodies that can licence or sell technologies. The information and advice function could include a substantial global component. Given that the vast majority of new knowledge is generated overseas, and the fact that individual firms generally lack the time, resources and expertise to monitor global technology developments, the centres could provide information to assist firms to import the latest technologies. This would follow the success of such centres set up by Governments elsewhere, such as in Sweden, Germany, France, Japan and Korea.⁷⁴⁴

Secondly, the centres could provide technology advisers or consultants on a fee-for-service basis to assist firms to identify, take-up and effectively apply key technologies. This service is particularly important because studies have shown that one of the most effective ways of transferring the vast array of knowledge needed for successful technological innovation is to transfer it via people with previous experience in the take-up and exploitation of technology.⁷⁴⁵

The program could work in two key ways. Firstly, it could be made available to any firms that sought out the program's services, and secondly, technology advisers could proactively seek out SMEs in the ETM and high value services sectors that would benefit from technology up-take.⁷⁴⁶ The latter approach is particularly important because, as the OECD found, many firms are unaware of new technology despite information on technology being available, and many have only a limited understanding of its nature and potential benefits. Therefore, programs that actively bring new technologies to firms tend to be more successful than programs that require firms to take the initial steps.⁷⁴⁷ As DIST has argued, leaving aside the 500 or so 'McKinsey firms', there are around 5,500 manufacturing firms with 20 to 99 employees that could benefit markedly from technology up-take. Technology policy focused on such manufacturers might achieve strong growth in domestic and export sales among ETM firms and help to produce an economy capable of competing on the basis of innovation.⁷⁴⁸

Such technical assistance could usefully be augmented by an enterprise improvement component, chiefly involving the supply of experts - on a fee for service basis - to assist firms to address critical business areas such as finance, work organisation, networking, marketing and exporting. Such an approach is important because effective acquisition and exploitation of technology is crucially dependent on best

⁷⁴⁴ *ibid.*, p.65,66.

⁷⁴⁵ *ibid.*, p.26,36.

⁷⁴⁶ Programs of a broadly similar nature run in France, the Netherlands, Denmark and Germany are outlined in Michael Welbourne, Martin Wardrop & Kevin Bryant, *op. cit.*, p.61,66,67.

⁷⁴⁷ *ibid.*, p.17,18,39.

⁷⁴⁸ *ibid.*, p.42.

practice work organisation. If the National Industry Extension Service program still existed, such a program could have been built on to the network.⁷⁴⁹

Where firms wished to engage in major technology development projects (as opposed to more simple technology up-take projects), the technology advisers could broker a consultancy contract between the firm and researchers. In formulating this part of the program, the Government could draw on the experience of the Norwegian TEFT program, which involves technology advisers, drawn from research institutes, assisting SMEs in the manufacturing industry to complete technology projects in conjunction with research institutes. The two goals of the program are to: improve the ability of SMEs to work with research institutes and complete technology projects; and help research institutes to focus their activity on commercial problems. Under the program, technology advisers approach companies and do an audit of their general capabilities and technology deployment to determine their readiness for a technology project. Where a firm has sufficient capacity to benefit from a technology project, the technology advisers work with the firm to develop a technology project focused on their core business needs, facilitate a contract between the firm and a research institution, and then remain on hand to provide advice and assistance to implement the project. Under the program, the Government pays for around 75 per cent of the project and the firm pays for around 25 per cent of the project. Firms can only participate once in the TEFT program.⁷⁵⁰

The TEFT program has been successful in a myriad of ways. Technology advisers, backed by significant knowledge of the firms in their geographical area, have been more successful in selecting firms with potential to successfully complete technology programs than grant-based programs. Almost half the participating firms have continued their collaboration with research institutes one to two years after participating in the program. Many participating firms improved their development of new products and processes, increased their on-going investment in R&D, and achieved higher revenue and lower costs.⁷⁵¹ International experience has shown that using technology advisers as intermediaries between firms and public research organisations is more effective than simply relying on direct relationships between firms and researchers, who often have vastly different outlooks and approaches. Intermediaries can be useful because they can provide information on technologies in a manner suited to effective communication with firms.⁷⁵²

In the Australian context, technology advisers could broker technology development consultancies between firms and research organisations such as CSIRO, higher education institutions, industry R&D bodies and CRCs. It may also be sensible to provide a lower subsidy to firms than under TEFT to help ensure projects are tightly focused on core business needs. Such a program could target key technology development needs for Australian industry, namely to: encourage relationships

⁷⁴⁹ *ibid.*, p.36,49.

⁷⁵⁰ Sigvald Grosfeld, *Seminar on the TEFT Program*, Held at the Department of Industry, Science and Tourism, 2.30-3.30pm on 9 July 1997.

⁷⁵¹ *ibid.*

⁷⁵² Michael Welbourne, Martin Wardrop & Kevin Bryant, *op. cit.*, p.39.

between firms and research institutes; facilitate technology development by firms; and encourage a more applied, commercial focus from research bodies.

To Labor's credit, *Working Nation* did involve provision of \$118.3 million dollars over 4 years from 1994-95 to establish a network of technology diffusion centres. Specialist Technology Counsellors were recruited to provide a technology information, advisory and referral service for SMEs to assist them to identify, evaluate and adopt key technologies, largely through the National Industry Extension Service network.⁷⁵³ However, the program had run for less than two years when the Government lost office and a substantial network of technology centres had not been established. Given the importance of key technologies to establishing competitive advantage on the basis of innovation, the Government must show much greater urgency in building up a comprehensive national technology infrastructure that can assist firms to take-up and effectively apply key technologies.

Technology diffusion (and development) policy must include a significant education and training component. For firms to rapidly take-up and exploit new technologies, they must have staff with technical skills and prior experience of successful adaptation and have an ongoing R&D capability so that key developments in technology and competition can be monitored and responded to. Further, managers must be: technologically astute; able to assess the strategic significance of new technologies; receptive to continual technology upgrading; committed to encouraging creativity, learning and risk taking; and willing to implement any work re-organisation and training necessary to facilitating effective deployment of technology.⁷⁵⁴

Unfortunately, in Australia, as in many OECD nations, a key reason for the slow diffusion of key technologies and their sub-optimal application is the scarcity of technically trained specialists and technologically astute managers. While many managers have a somewhat vague general awareness of new technologies, most lack a significant understanding of the specific ways new technologies could assist their business. In the absence of full receptiveness to technology by managers, access to technology will not lead to significant technology up-take by firms.⁷⁵⁵ Thus, technology policy must include significant investment in education and training in areas crucial to technology development and diffusion, such as science, engineering and management.⁷⁵⁶

Government could also fund R&D consortia from key sectors to undertake projects targeted on key technologies, as done in Japan and Europe. Groups of companies from a sector decide on a R&D project on a technology of particular importance to them all. Government never provides more than 50 per cent of the funding to ensure that companies focus on projects that are worth them risking their money.⁷⁵⁷ However, government funding, by reducing risk and providing financial incentive,

⁷⁵³ *Working Nation: Policies and Programs*, op. cit., p.65,66,211.

⁷⁵⁴ Michael Welbourne, Martin Wardrop & Kevin Bryant, op. cit., p.17,20,21,23,24.

⁷⁵⁵ *ibid.*, p.20,38.

⁷⁵⁶ *ibid.*, p.38.

⁷⁵⁷ Stephen S. Cohen & John Zysman, op. cit., p.226,227.

encourages speedier and more substantial development efforts in new technologies. Such an approach can increase the rate of technology development and diffusion across wide areas of the economy.⁷⁵⁸

The Government could also consider the provision of incentives to firms to help them to lease or purchase specified key technologies. Such policies helped Japan diffuse numerically controlled machine tools and robots among smaller producers considerably faster than their foreign competitors.⁷⁵⁹ The Italian Government has encouraged the diffusion of advanced manufacturing technology through similar mechanisms. Where there is rigorous domestic rivalry among suppliers of the relevant technology, incentives to lease or purchase advanced technology can increase innovation and upgrade competitive advantage by firstly, encouraging firms to take-up advanced technology quickly and thereby achieve advantage based on innovation and secondly, by stimulating local suppliers of such advanced technology.⁷⁶⁰

Alternatively, the Government could also consider the merits of establishing a Technology Credit Insurance Corporation (TCIC), following the example of the Japanese Machinery Credit Insurance System, but focusing it more narrowly on key technologies. The TCIC would insure lease contracts and instalment-sales contracts for strategic technologies. This would enable lease companies, manufacturers and distributors to more readily lease or sell technology to SMEs by removing the risk of a serious loss caused by the default of leasees or buyers. For the cost of an insurance premium (which in the Japan scheme is on average less than one per cent of sales revenue), technology providers could greatly increase sales growth. In this way, the rate of diffusion of key technologies to SMEs could be increased. In Japan, the Japanese Credit Insurance Corporation has insured between 235,000 and 299,000 leases or purchases of machinery a year, thereby speeding the diffusion of key technologies such as machine tools, computers and software.⁷⁶¹

⁷⁵⁸ Laura D'Andrea Tyson & John Zysman, ch.3 'Development strategy and production innovation in Japan' in Chalmers Johnson, Laura D'Andrea Tyson & John Zysman (eds), *op. cit.*, pp.59-140 at p.115,116.

⁷⁵⁹ Stephen S. Cohen & John Zysman, *op. cit.*, p.226,227.

⁷⁶⁰ Michael E. Porter, *op. cit.*, p.651. Technology subsidy programs run in Denmark and France are discussed in Michael Welbourne, Martin Wardrop & Kevin Bryant, *op. cit.*, at p.68.

⁷⁶¹ Details of the Japanese Machinery Credit Insurance System are provided in Small Business Credit Insurance Corporation, *Japanese CIC 1996*, Small Business Credit Insurance Corporation, Tokyo, Japan, 1996, pp.19-24.

Chapter 10: Best Practice Work Organisation

1. The Importance of Best Practice Work Organisation to Competitive Advantage Based on Innovation

In most eras in modern history, particular work organisation paradigms have been crucial to achieving competitive advantage. Today, firms and nations that can establish work organisation conducive to fostering innovation can achieve competitive advantage. Japanese lean production is very instructive in this regard, because it can enable firms to achieve competitive advantage, through innovation, over rivals persisting with Taylorist mass production. While lean production is primarily applicable to manufacturing, many of its tenets can usefully be applied to other sectors of the economy. A five year study by the Massachusetts Institute of Technology of 90 car plants in 17 different countries found that lean production: was twice as productive as mass production; produced much higher quality, with more than three times less defects per 100 cars; and produced a greater rate of product innovation, allowing firms to constantly innovate to meet customer needs. Lean production helped Japan to increase their share of world car production from two to 25 per cent in the 25 years from 1955.⁷⁶²

Many nations are yet to have fully mastered the modern best practice paradigm. Therefore, a major increase in competitive advantage awaits those nations who can gain the knowledge of what modern best practice involves, disseminate that knowledge, and then implement best practice throughout their workplaces.

Precisely what best practice work organisation entails is a contentious issue. This part of the chapter therefore requires an extra task compared with other chapters in part two. Firstly, it must outline the components of best practice, and secondly, justify the selection of the component by detailing its importance to achieving an innovation-driven economy. The components of best practice outlined below are not exhaustive, but simply highlight some of the best methods of establishing an innovation-driven firm.

Recognising the Importance of Innovation

The first element of best practice is to recognise that innovation is the key to competitive advantage. Only then can firms tailor their workplace to the demands of competing through the creation of high quality, innovative, value-added products.

Innovation Chain Capabilities

Best practice firms have sound capability throughout the innovation chain. Management capable of implementing best practice work organisation, creating innovative products and seeking out export opportunities is a crucial part of best practice. Management is discussed in the next chapter. Of course, an in-house R&D

⁷⁶² James P. Womack, Daniel T. Jones & Daniel Roos, *The Machine that Changed the World*, Macmillan, New York, USA, 1990, p.ii,69,75,81,82,92,225.

capacity, the ability to gain finance and well-developed export marketing capability are also vital to the innovation process. These matters are discussed in chapters eight, 13 and 14 respectively.

Innovation through Co-operative Linkages

To maximise the capacity to innovate and improve performance, firms must draw on ideas and information from leading edge customers, R&D providers, suppliers and other firms in their industry. The following discusses each of these linkages in turn.

Linkages with leading edge buyers, which are generally the most respected firms in the most sophisticated market for a firm's product, can improve the capacity of firms to innovate in several ways. Firstly, leading edge buyers generate ideas for firms by asking them to develop new products or processes, and by exchanging ideas on new products and processes. Among McKinsey's emerging exporters, 80 per cent said overseas customers were 'very important or critical' sources of information and 72 per cent said domestic customers were 'very important or critical' sources of information. Secondly, leading edge buyers foster innovation by giving firms access to other strategic customers. This assists by providing direct sales and further access to ideas, and bolsters the firms credibility in the market. Overall, 30 per cent of McKinsey's emerging exporters said that buyers were very important or critical for finding and developing new overseas buyers. Finally, when leading edge buyers use Australian firms to supply their products, they demand very high standards. A survey of McKinsey's emerging exporters found that 82 per cent believed that overseas customers were 'very important or critical' in raising their performance over the last 5 years.⁷⁶³

Best practice firms also work constructively with their suppliers in order to identify opportunities to innovate. The close relationship leads to suppliers shifting their focus from simply seeking to be the lowest cost supplier in order to win contracts, to instead focusing on the keys to international competitiveness for both firms and suppliers, namely innovation, quality and value adding. The best of McKinsey's high growth emerging exporters were willing to: work closely with suppliers on product development; invest in and train their suppliers; and encourage open communication and the exchange of ideas. They demanded targets for performance improvement and regularly evaluated their performance. In turn, the McKinsey firms gained because suppliers had incentive to focus on, and invest in, the firm's long-term success.⁷⁶⁴ In such circumstances, the lead firm gains significantly through access to innovation from suppliers, and by gaining efficiency through having a reliable, high quality, long-term source of supply.⁷⁶⁵ Porter's study also found that close co-operative relationships between firms and suppliers was important to achieving competitive advantage through innovation.⁷⁶⁶

⁷⁶³ Australian Manufacturing Council Secretariat & McKinsey and Company, *op. cit.*, p.10-13.

⁷⁶⁴ *ibid.*, p.6,7,21,22,24,25.

⁷⁶⁵ Anand Kulkarni, *op. cit.*, p.365.

⁷⁶⁶ Michael E. Porter, *op. cit.*, at p.103 notes: 'Competitive advantage emerges from close working relationships between world-class suppliers and industry. Suppliers help firms perceive new methods and opportunities

A close relationship between the parent firm and its suppliers is a key tenet of Japanese lean production. In lean production, suppliers are picked on the basis of long-term relationships, not on the basis of being the lowest bidder. Each supplier specialises in one type of component and does not compete with other suppliers for that component, so suppliers actively exchange knowledge on innovative production techniques among each other. Suppliers work constructively with lead firms to produce the best possible component. In return, the parent firm fosters the relationship in a range of ways, such as by: respecting the right of the supplier to make a fair profit; allowing the supplier to keep any proceeds that come from cost saving innovations; keeping supply orders as constant as possible; providing finance; and sharing personnel. This engenders the necessary collaboration between suppliers and parent firms and produces great incentive for continuous improvement and cost cutting. The lean production method of organising suppliers led to a vastly superior performance than achieved among mass producers in productivity, innovation, quality, cost and responsiveness to changing market demands for both suppliers and parent firms.⁷⁶⁷

By contrast, in Taylorist production systems, which are still prevalent in Australian manufacturing, firms and their suppliers have adversarial relationships. The parent firm generally designs the part in intricate detail, with supplier's bids competing on cost alone. Working to blueprint, suppliers have little opportunity or incentive to suggest improvements in production design based on their own experience, meaning a significant source of innovation, quality and cost reduction is ignored. Indeed, suppliers actively withhold information from the lead firm about how parts are produced so as to seek maximum profits. Further, because each supplier is 'bidded off' against the others, they don't share ideas on production techniques, thereby retarding productivity and innovation. The overall approach brings lower quality, less innovation and higher costs than where suppliers and assemblers work together.⁷⁶⁸

Best practice firms also work collaboratively with other firms. Many firms, particularly SMEs, lack the resources needed to finance investments in capabilities vital to their competitiveness. Joint initiatives among firms can facilitate projects on research, technology or product development, distribution and marketing.⁷⁶⁹ AMC-McKinsey research found that Australia's best performing SMEs in the ETM area are much more likely than average to engage in joint initiatives in product development,

to apply new technology. Firms gain quick access to information, to new ideas and insights, and to supplier innovations. They have the opportunity to influence suppliers' technical efforts as well as serve as test sites for development work. The exchange of R&D and joint problem solving lead to faster and more efficient solutions. Suppliers tend to be a conduit for transmitting information and innovations from firm to firm. Through this process, the pace of innovation within the entire national industry is accelerated.'

⁷⁶⁷ James P. Womack, Daniel T. Jones & Daniel Roos, op. cit., p.61,62,146-151.

⁷⁶⁸ *ibid.*, p.58,59,61,140-142,144,145.

⁷⁶⁹ Australian Manufacturing Council Secretariat & McKinsey and Company, op. cit., p.39,40; and Jenny Stewart, *The Lie of the Level Playing Field*, op. cit., p.258,259.

product research and process R&D.⁷⁷⁰ Firm collaboration can thus assist firms to innovate, compete, grow and export beyond what they could achieve alone.

Thus, it is a complex mix of competition between firms in some contexts, and co-operation in others, rather than simply unfettered competition, that leads to solid economic performance.⁷⁷¹

Constant Innovation to Meet Customer Needs

Best practice firms recognise the importance of continuously innovating to meet customer needs. Fast changing consumer demand creates opportunities for firms to create competitive advantage by being the first to innovate to meet new customer needs.⁷⁷² This requires that firms have flexible production systems. Lean production allows new cars to be designed in half the time taken by mass producers. Japanese firms have used short model cycles and product proliferation to achieve competitive advantage in a range of areas, including cars, motor cycles, cameras, watches and consumer electronics. By contrast, Taylorist production systems rely on mass production of standard products to achieve economies of scale, and do not have the capacity to produce flexibly. Such systems therefore can not meet changing consumer demands as effectively and result in declining competitiveness.⁷⁷³

In the Japanese car sector, flexible production means that cars can be ordered by customers with precise specifications. Dealers and manufacturers have close relationships. Dealers have information on computer on all their customers in their geographic area and periodically visit them to identify their customer needs. These customer preferences are fed back into the product development process, with sales staff being loaned to the manufacturer at that stage. In this way, innovations are always directed at meeting customer needs. The strong investment in providing excellent service induces brand loyalty and repeat sales and ties the customer to the retailer and the manufacturer.⁷⁷⁴

By contrast, in mass production systems, manufacturers produce large numbers of standard cars and can not produce to order. Further, the relationship between the manufacturer and the dealer is antagonistic. As sales are left exclusively to the dealers, there is no mechanism for customer preferences to be fed back to the manufacturer. Customer needs are not met as effectively. Indeed, given the antagonistic relationship between manufacturers and dealers, sales people seek to give customers as little information as possible and sell for the maximum possible

⁷⁷⁰ McKinsey and Company & the Australian Manufacturing Council Secretariat, op. cit., p.41,42 reported that among Australia's emerging ETM exporters, 65 per cent of high growth firms have joint initiatives for product development compared to 39 per cent of all firms, 45 per cent have joint initiatives for product research compared to 28 per cent for all firms, and 40 per cent have joint initiatives for process R&D compared with 22 per cent of all firms.

⁷⁷¹ Jenny Stewart, *The Lie of the Level Playing Field*, op. cit., p.258.

⁷⁷² McKinsey and Company & the Australian Manufacturing Council Secretariat, op. cit., p.57.

⁷⁷³ James P. Womack, Daniel T. Jones & Daniel Roos, op. cit., p.64,65,98,127.

⁷⁷⁴ *ibid.*, p.66,181-184,187,188.

price. The focus is on one profitable sale, rather than establishing the trust necessary for a lifetime of sales.⁷⁷⁵

Worker Empowerment

Best practice firms also utilise the full potential of workers to maximise competitive advantage. Such worker empowerment can be facilitated in two key ways. Firstly, it can be facilitated at the workplace level through reforms such as: reducing or removing supervision and devolving more responsibility to workers; increasing training and multiskilling to equip workers with the skills to manage their more demanding roles; establishing work teams; fostering worker commitment by giving staff ownership over their work; and achieving continuous improvement by establishing mechanisms to implement the ideas of workers on work organisation.⁷⁷⁶

Worker empowerment is a key part of Japanese lean production and it helped Japanese manufacturers to create a competitive advantage over their Taylorist rivals. Taylorism involves workers doing a simple, unskilled, repetitive, alienating task on a production line. Classification structures are hierarchical. Supervisors act as disciplinarians and specialists undertake other activities such as machine repair. Such hierarchical structures and deskilled workers can not produce competitive advantage in key areas such as quality, innovation, flexibility, continuous improvement and customer focus.⁷⁷⁷ By contrast, Japanese lean production empowered workers to achieve competitive advantage in all these areas. Workers were placed in teams and put in charge of their own part in the production process. The maximum number of tasks and responsibilities were transferred to those workers actually adding value on the line. Supervisors were entirely removed, thereby saving money on what had been an activity that added little or no value. Investment in training was increased greatly as workers had to become multiskilled, learning all the key tasks in their work area. Workers were actively encouraged to think proactively about how to improve the production process, and management were prepared to delegate maximum responsibility to the work team. The teams periodically met to suggest methods of improving work processes, which led to continuous, incremental improvement. This process has more recently been called 'quality circles'.⁷⁷⁸

A significant competitive advantage was achieved by empowered workers under lean production, compared with their de-skilled, alienated counterparts in Taylorist production systems. While most workers in Europe and North America did not make a single suggestion on how to improve work processes over a year, Japanese workers made an average of 62 suggestions per year, most of which were implemented.⁷⁷⁹ One study found that 60 per cent of industrial innovation in Japan

⁷⁷⁵ *ibid.*, p.172-174.

⁷⁷⁶ Such changes are advocated by: Bill Ford 'Integrating Technology, Work Organisation and Skill Formation: Lessons from Manufacturing for Ports' in Michael Costa & Michael Easson (eds), *op. cit.*, p.229-250 at p.237-245; and Pappas, Carter, Evans & Koop/Telesis, *op. cit.*, p.58,59.

⁷⁷⁷ Bill Ford 'Integrating Technology, Work Organisation and Skill Formation: Lessons from Manufacturing for Ports' in Michael Costa & Michael Easson (eds), *op. cit.*, p.229-250 at p.231.

⁷⁷⁸ James P. Womack, Daniel T. Jones & Daniel Roos, *op. cit.*, p.56,99.

⁷⁷⁹ *ibid.*, p.92.

emerges from the shop floor.⁷⁸⁰ Empowering and inspiring workers to lead the innovation process brought surging competitive advantage through improvements in work processes, quality, productivity and product innovation.⁷⁸¹

Worker empowerment also improves product quality because it limits supervision and instead places ultimate responsibility on workers for the outcome of their work. Some Australian managers would find this a ridiculous suggestion, believing that supervisors can detect the faults of workers and fix them, thereby improving quality. In fact, it is precisely when the 'safety net' of supervision is removed and staff are held ultimately responsible for the outcomes of their work that quality has been shown to rise. Quality also rises because giving staff control over their work improves work satisfaction and the pride workers take in their work. Workers also have more time to focus on quality when they are freed from having to constantly show their work to managers.

The Womack, Jones and Roos study showed that giving workers control and responsibility for their work outcomes leads to improved quality. In mass production plants, workers were not held responsible for the quality of their work. They simply allowed defects to pass down the line because they knew there was a rework area at the end of the line. By contrast, in lean production, workers were made responsible for the quality of their work. Over time, as work teams gained experience in identifying and tracing problems to their ultimate cause, the number of errors dropped dramatically and although every worker could stop the line, it almost never stopped. Eventually, Toyota assembly plants performed negligible rework, yet had among the lowest number of defects in the world. By contrast, most mass production plants devote 20 per cent of plant area and 25 per cent of their work hours fixing mistakes. Productivity and quality achieved are considerably lower.⁷⁸²

The second way worker empowerment can be facilitated is through the establishment of industrial democracy structures that allow co-determination of company decisions in areas such as training and skill formation, work organisation, innovation, quality control, investment and marketing. *Australia Reconstructed* noted that such structures have been operating in West Germany, Austria, Sweden and Norway for decades. For example, in Sweden, there are generally two worker representatives on Boards of Directors and at least 50 per cent worker representation on industrial democracy structures such as economic committees, works councils and safety committees. *Australia Reconstructed* concluded that employee empowerment in those nations, by unlocking the potential of workers, led to improved output, productivity, quality, customer service and competitiveness and reduced disputation and absenteeism. Employers agreed that worker empowerment was positive economically, even in its most contentious application, namely representation on

⁷⁸⁰ ACTU/TDC Mission to Western Europe, op. cit., p.155,156.

⁷⁸¹ James P. Womack, Daniel T. Jones & Daniel Roos, op. cit., p.92. This work organisation approach is also endorsed in: Stephen S. Cohen & John Zysman, op. cit., p.206; Bill Ford 'Integrating Technology, Work Organisation and Skill Formation: Lessons from Manufacturing for Ports' in Michael Costa & Michael Easson (eds), op. cit., p.229-250 at p.237,241; and Peter Ewer, Winton Higgins & Annette Stevens, op. cit., p.58,59.

⁷⁸² James P. Womack, Daniel T. Jones & Daniel Roos, op. cit., p.56-58,79,80,90,91,99.

Boards of Directors.⁷⁸³ These benefits of industrial democracy and employee empowerment have been confirmed elsewhere.⁷⁸⁴

Utilising the Talents of All

Best practice firms do not discriminate against women and minority groups. Instead, they recruit on the basis of merit because they recognise that achieving competitive advantage in innovation-intensive production requires a highly skilled workforce. Studies have confirmed the importance of equal employment opportunity (EEO) to economic performance. A United States study of Standard and Poors 500 companies found that companies committed to promoting women and minority workers had an average annual return on investment of 18.3 per cent, compared with 7.9 per cent among those firms with poor EEO records.⁷⁸⁵ Given the under-representation of women and migrants in senior positions, it is vital that firms have EEO strategies to ensure recruitment, selection, promotion and transfer occurs on the basis of merit.⁷⁸⁶ Best practice firms complement these measures with initiatives to assist workers to reconcile efficient and productive work with their family responsibilities, a vital consideration given that 60 per cent of families with dependent children have both parents in the workforce.⁷⁸⁷

In summary, to achieve competitive advantage based on innovation, a new style of workplace is required. Hierarchical structures that actually prevent staff from making a significant contribution to continuous improvement must give way to work organisation that: recognises innovation and quality as central to achieving competitive advantage; gives workers the skills, autonomy and responsibility to drive continuous improvement; focuses on customer needs; maintains strong linkages with leading customers, suppliers and other firms directed at increasing the rate of innovation; and includes strong capability in R&D, management, deploying technology and export marketing. If Australia could rapidly implement best practice throughout its economy, it could achieve a surge in national competitiveness through innovation.

2. Market Failure and Australia's Weaknesses in Best Practice Work Organisation

History shows that markets can take decades to disseminate new paradigms of best practice throughout national economies. The capacity to implement new forms of work organisation has been a key cause of differing economic outcomes between nations. Nations that have quickly mastered new best practice paradigms have

⁷⁸³ ACTU/TDC Mission to Western Europe, op. cit., p.136,162.

⁷⁸⁴ Department of Employment and Industrial Relations, *Industrial Democracy and Employee Participation: A Policy Discussion Paper*, Australian Government Publishing Service, Canberra, 1986, p.37.

⁷⁸⁵ Stephen Gaskill, *A Solid Investment: Making Full Use of the Nation's Human Capital: Recommendations of the Federal Glass Ceiling Commission*, Federal Reserve Bank of St Louis Missouri, Washington D. C., 1995, p.5.

⁷⁸⁶ Affirmative Action Agency, *A Practical Guide to Affirmative Action*, Affirmative Action Agency, Sydney, n.d., outlines an EEO policy.

⁷⁸⁷ Australian Bureau of Statistics, *Labour Force Status and Other Characteristics of Families Australia June 1996*, Cat. no.6224.0, p.2.

achieved national affluence. For example, in the 1800s, English mastery of *craft production*, in which each worker made whole products, was an important cause of their economic dominance. In this century, the rise of the United States to economic superpower was partly caused by their mastery of *Taylorist* or *Fordist* production.⁷⁸⁸ By the 1940s, the United States accounted for more than half the world's gross national product.⁷⁸⁹ By contrast, Europe did not convert to Taylorist mass production for decades after the United States, leaving a gulf in economic outcomes. It took 50 years to diffuse across the world. Finally, the unprecedented economic performance of the Japanese economy since 1950 was partly due to the fact that they were first to master *lean production*, which has been shown to lead to vastly superior quality, productivity and innovation than that achievable under Taylorism. While Japan had invented lean production and was disseminating it widely throughout their economy by the 1950s, Western manufacturers ignored lean production for decades and stuck with their mass production techniques. Many still persist with Taylorism.⁷⁹⁰

Australian firms have barely begun to implement modern best practice work organisation. Indeed, most do not recognise that innovation is the key to national competitive advantage and are not aware of many of the key components of best practice. Instead, many firms focus on negative cost-cutting and selling low cost products. The ensuing work organisation can never achieve competitive advantage through innovation. Firms that seek to compete on the basis of cost in innovation-intensive market segments are prone to failure because their focus on low prices creates insufficient revenue to finance sufficient investment in capabilities necessary to producing and selling innovative products, such as R&D, skills development and marketing. The result is that firms move progressively into market segments vulnerable to price-based competition from developing countries. As argued earlier, this can not be the basis for sustainable competitive advantage.⁷⁹¹

Given that Australian firms generally lack awareness of what constitutes best practice, it is not surprising that they have not implemented it to any great extent. The widespread ignorance and poor overall competency of Australian management is a key reason why best practice work organisation has failed to spread widely throughout the economy.⁷⁹² The R&D performance of most firms is poor, many lack the skills to attract finance, and the great majority do not export.

Australian firms generally do not utilise linkages with leading edge customers, R&D providers, suppliers and other firms in their industry. An AMC-McKinsey study found that even most of Australia's emerging ETM export firms still lack the web of relationships that could provide them with ideas for innovation and performance improvement. While many had developed strong links with customers, few had

⁷⁸⁸ James P. Womack, Daniel T. Jones & Daniel Roos, op. cit., p.256.

⁷⁸⁹ Lester Thurow, *Head to Head*, op. cit., p.57.

⁷⁹⁰ James P. Womack, Daniel T. Jones & Daniel Roos, op. cit., p.256-258.

⁷⁹¹ Lance Worrall, ch.10 'Networking as industrial strategy' in Roy Green & Rodin Genoff (eds), *Making the Future Work: Crisis and Change in the South Australian Economy*, Allen and Unwin, St Leonards, New South Wales, 1993, pp.183-199 at p.187.

⁷⁹² Economic Planning Advisory Council, *Human Resource Management and Workplace Change: Proceedings of an EPAC Roundtable held in Canberra on 6 February 1995 - Council Paper No.8*, Australian Government Publishing Service, Canberra, 1995, p.6.

strong links with other firms, suppliers and public R&D providers.⁷⁹³ Australian firms have generally been opposed to joint projects because they believe sharing market knowledge with competitors gives away potential advantage. Unfortunately, it is often only through joint projects that SMEs can make the investments necessary to survive and grow in innovative segments.⁷⁹⁴ The failure to share information also retards the diffusion of innovative ideas, technology and best practice work organisation throughout the economy.⁷⁹⁵

Worker empowerment has not been substantially achieved in Australia, although the award restructuring process did lead to a significant increase in multiskilling,⁷⁹⁶ brought some progress in establishing skills-based classification structures and flatter structures, and led to increased investment in training.⁷⁹⁷ However, many workplaces remain hierarchical, with workers untrained, given little responsibility, heavily supervised and understandably apathetic. Many managers remain paternalistic and defensive of 'managerial prerogatives'. Adversarial relationships between workers and management still generally prevail and workers are seen as costly factors of production to be controlled, rather than assets with much to contribute towards achieving competitive advantage. There is little enthusiasm for active employee involvement in workplaces through work groups on the shop floor.⁷⁹⁸ A 1995 EPAC paper noted that '...the transition from a 'compliance' to a 'commitment' model of employment relations ...is incomplete or piecemeal in many organisations...'⁷⁹⁹ The Australian Workplace Industrial Relations Survey found that in 1990, only 13 per cent of all workplaces with over 20 employees had installed quality circles or productivity improvement groups.⁸⁰⁰ Progress towards the establishment of work teams has been poor.⁸⁰¹

In manufacturing, Australia is being crucially disadvantaged by widespread continuation of Taylorist work organisation. Taylorist workplaces, because they alienate and stifle workers, rather than empower them to drive change, can never bring competitive advantage based on innovation.⁸⁰²

There is also little enthusiasm for active employee participation though representation on industrial democracy structures. Kitay and Lansbury noted that '...there has been little role for unions and employees in the governance of

⁷⁹³ Australian Manufacturing Council Secretariat & McKinsey and Company, op. cit., p.iii,6,7.

⁷⁹⁴ These are the views of Dr Cantoni, director of the Australian Telecommunications Research Institute at Curtin University as reported in 'Research collaboration the key' in *The Australian*, 9 June 1992, p.9.

⁷⁹⁵ Anand Kulkarni, op. cit., p.364.

⁷⁹⁶ Jim Kitay & Russell D. Lansbury, 'Human resource management and industrial relations in an era of global markets: Australian and international trends' in Economic Planning Advisory Council, *Human Resource Management and Workplace Change*, op. cit., pp.17-72 at p.45.

⁷⁹⁷ Lance Worrall, op. cit., p.198,199; and *Working Nation: Policies and Programs*, op. cit., p.33.

⁷⁹⁸ Bill Mansfield, ch.9 'Trade unions and the challenge of change' in Michael Costa & Michael Easson (eds), op. cit., pp.187-206 at p.192,194; Pappas, Carter, Evans & Koop/Telesis, op. cit., p.14; and ACTU/TDC Mission to Western Europe, op. cit., p.157.

⁷⁹⁹ Economic Planning Advisory Council, *Human Resource Management and Workplace Change*, op. cit., p.19.

⁸⁰⁰ Frederick G. Hilmer 'Beyond benchmarking and continuous improvement: A challenge to management' in Michael Costa & Michael Easson (eds), op. cit., pp.167-186 at p.170.

⁸⁰¹ Jim Kitay & Russell D. Lansbury, op. cit., p.46.

⁸⁰² Peter Ewer, Winton Higgins & Annette Stevens, op. cit., p.140,141.

enterprises...⁸⁰³ Forums in which management and labour could discuss work organisation reforms have not developed in most organisations.⁸⁰⁴ Surveys have shown that a large majority of managers believe that employee involvement in decision making has 'little impact' on productivity.⁸⁰⁵ In nearly three quarters of workplaces, unions are not consulted or even informed about organisational changes that affect employees. Only seven per cent of workplaces have workers on Boards of Directors.⁸⁰⁶

Thus, while nations like Japan extract maximum input from employees on how to create competitive advantage, the vast majority of Australian firms persist with hierarchical, top-down management and thereby ignore the vast potential of the workforce to contribute to innovation, quality and productivity.⁸⁰⁷

The talent and skill of women continues to be under-utilised. Despite having higher numbers in higher education, women are under-represented in jobs critical to the establishment of national competitive advantage. At November 1996, women remained concentrated in low paid occupations, with 53 per cent of female employees working as clerks and sales and personal service workers and a further 9 per cent working as labourers and related workers. Meanwhile, women comprised only 2.1 of Australia's 6.3 million full time workers; were over-represented in part-time and casual work; and made up only 24 per cent of managers and administrators and 45 per cent of professionals/para-professionals.⁸⁰⁸ The 1996 *Boards of Directors in Australia* study found that only one per cent of company executive directors were women.⁸⁰⁹ Widespread introduction of work and family measures is also yet to be achieved.⁸¹⁰

People from non-English speaking backgrounds are also under-represented in key occupations including management. This is particularly concerning given their capacity to increase exports through their language skills and understanding of export markets.⁸¹¹ Given that women and migrants account for the majority of the population, their under-representation in jobs crucial to national competitiveness is harming national economic performance.

⁸⁰³ Jim Kitay & Russell D. Lansbury, op. cit., p.55.

⁸⁰⁴ Peter Ewer, Winton Higgins & Annette Stevens, op. cit., p.70.

⁸⁰⁵ Pappas, Carter, Evans & Koop/Telesis, op. cit., p.73-75.

⁸⁰⁶ Jim Kitay & Russell D. Lansbury, op. cit., p.56.

⁸⁰⁷ Bill Mansfield, op. cit., p.195.

⁸⁰⁸ Australian Bureau of Statistics, *Labour Force Australia November 1996*, Cat. no.6203.0, p.11,45.

⁸⁰⁹ Forn/Kerry International & the Australian Institute of Company Directors, *Boards of Directors in Australia, Fifteenth Study 1996*, Forn/Kerry International & the Australian Institute of Company Directors, Sydney, 1996, p.3,6,7.

⁸¹⁰ Economic Planning Advisory Council, *Human Resource Management and Workplace Change*, op. cit., p.11.

⁸¹¹ Industry Task Force on Leadership and Management Skills, *Enterprising Nation: Renewing Australia's Managers to Meet the Challenges of the Asia-Pacific Century: Report of the Industry Task Force on Leadership and Management Skills: Executive Summary*, Australian Government Publishing Service, Canberra, 1995, p.26,27.

3. Rationalism and Best Practice Work Organisation

Orthodox theory subsumes any explanation of the dynamic process of work organisation under an abstract model of factor substitution and technical changes induced by changes in relative factor prices.⁸¹² Partly as a result, rationalists tend to believe that competition and unfettered markets will alone produce best practice work organisation.

There are two key weaknesses in the rationalist approach to the labour market. The first weakness is that wage and cost reductions are seen as the key to improved economic outcomes. For some rationalists, this prescription stems from their focus on factor substitution. Any unemployment is assumed to stem from wages being above their market clearing level. Wages must be cut to increase the demand for labour and eliminate unemployment. As noted earlier, a sole focus on cost-cutting can not produce sustainable competitive advantage.

The second rationalist policy weakness is the assumption that relatively free markets will produce best practice. Rationalist prescriptions in the labour market are almost solely directed to methods of deregulation, such as moving from centralised wage fixing to a deregulated enterprise bargaining framework, with a minimal role for awards, unions, workers, government and the Australian Industrial Relations Commission in influencing workplace outcomes. Very little attention is given to the desired *ends* of workplace change, namely what constitutes best practice work organisation and how it could be implemented. It is simply assumed that in an environment of free markets and competition, firms will know what to do. The weakness of this approach is that, as demonstrated above, most firms have little knowledge of the components of best practice, let alone the means or will to implement it. Indeed, the situation is worse than this. The rationalist dominated debate has convinced many employers that the key to improved economic performance is to focus largely on cutting costs, wages and conditions. Again, the market has failed to disseminate best practice work organisation, despite the existence of a modern best practice paradigm for more than four decades.

4. Industry Policies to Foster Excellence in Work Organisation

In an environment in which the market mechanism can take decades to diffuse new forms of best practice, Australia can increase its international competitiveness by being among the first nations to implement the new paradigm of best practice. In manufacturing, only one nation has mastered lean production, while many are just beginning to implement it.⁸¹³ Given the improvements to competitiveness available through implementing best practice, this situation provides a major opportunity for Australia to significantly improve its economic performance.

In all nations that have been relatively successful in diffusing best practice throughout their economies, public agencies have guided the diffusion.⁸¹⁴ Much of

⁸¹² James Juniper, ch.4 'Production systems debate' in Michael Costa & Michael Easson (eds), op. cit., pp.51-77 at p.57.

⁸¹³ James P. Womack, Daniel T. Jones & Daniel Roos, op. cit., p.277,278.

⁸¹⁴ Economic Planning Advisory Council, *Human Resource Management and Workplace Change*, op. cit., p.10.

what can be done to encourage best practice work organisation is discussed in other sections in part two. In particular, the spread of best practice would be fostered by policies to improve Australia's capability in education and training, management, R&D, technology diffusion and export marketing.

Government can build on these initiatives in two key ways. Firstly, Australian employers, managers, unions, workers and bureaucrats must be comprehensively educated in what best practice involves. This will require the Government, in consultation with industry and unions, to formulate and publish a vision of best practice and disseminate it widely. Secondly, the Government needs to provide mechanisms to facilitate the rapid implementation of best practice.

To diffuse best practice quickly, the capacity to produce workplace change across whole industries should be restored and fostered. Devolving agreements solely to the workplace level means there is little capacity to quickly implement best practice across whole industries and thereby achieve rapid surges in competitiveness. Nations that have advanced the furthest towards best practice have kept a strong industry level approach and some centralisation, sometimes in concert with workplace deals.⁸¹⁵ To foster industry-wide workplace change, industry workplace change committees could be established with representation from employers and unions. Their aim would be to establish an overall vision for workplace change in the industry and then produce industry agreements to implement the vision in the industry's workplaces over time. It is hoped that industry agreements, complemented by specific agreements at the workplace level, would facilitate the rapid diffusion of best practice across the economy.

The Government could establish an Industry Reform Program to support the establishment of industry agreements. The program could provide partial funding for agreement making, research and expert personnel and could help produce literature on workplace change being undertaken in the industry. Ideally, industry agreements might comprehensively tackle several major planks of the best practice agenda. For example, firms could decide to establish the worker empowerment agenda over a three year period. Having numerous firms in the industry complete the process together would provide great opportunities for shared learning and efficient implementation. It would also make production of information facilitating the process efficient and effective. Conceivably, industry agreements, with the support of the Industry Reform Program, could lead to widespread implementation of the best practice agenda within a decade and produce a surge in competitive advantage.

Workplace agreements could usefully complement such industry agreements. However, such workplace agreements must involve co-determination by workers and management, not an employer/management driven process with mock consultation of the workforce.⁸¹⁶ Legislation and/or a national agreement between the ACTU, peak employer organisations and the Government could achieve co-

⁸¹⁵ Jim Kitay & Russell D. Lansbury, *op. cit.*, p.71,72.

⁸¹⁶ Pat Wright, ch.9 'Towards a mini-Accord' in Roy Green & Rodin Genoff (eds), *op. cit.*, pp.158-180 at p.173-174.

determination through 50 per cent worker representation on industrial democracy structures covering areas crucial to the competitiveness of firms. The Government could also consider legislation to require employee participation on Boards of Directors in companies with more than 100 employees.⁸¹⁷ Employees, because they work at the coal face, can make substantial contributions to productivity if their potential is unlocked via participation on workplace governance structures, rather than being substantially ignored, as is the case at present.

To encourage positive economic outcomes, a 'no disadvantage test' should remain on workplace or industry agreements and a minimum award safety net covering all 'standard' conditions should be enshrined in legislation. There should also be regular National Pay Cases to provide across the board pay increases.⁸¹⁸ Such a framework prevents firms from seeking the ultimately self-defeating strategy of cutting worker entitlements as a means of improving competitiveness. Instead, as shown by the experience of firms in Japan, Germany and Italy, firms must focus on reforming their work processes and implementing best practice to achieve sustainable competitive advantage.⁸¹⁹

The Government could encourage the spread of lean production throughout manufacturing through a Lean Production Program. The Government would provide incentives for Japanese firms to locate plants in Australia where they involve the establishment of lean production. In return, the firm would train Australian workers and managers to run the enterprise so that we could establish a skills and knowledge base in lean production. Site visits by other Australian firms and publications on lean production would assist to disseminate lean production throughout manufacturing. It has been shown lean production, after a learning period, can be successfully transplanted in nations outside Japan, and that having lean competitors nearby mass producers shows the latter the methods for reform.⁸²⁰

These initiatives could be complemented by the recommencement of programs established by Labor which, although relatively small in size, showed the potential of government programs to diffuse best practice. In particular, the National Industry Extension Service (NIES) network delivered enterprise improvement programs through a network of offices throughout Australia. In 1994-95, nearly 3,000 firms participated in AusIndustry-NIES enterprise improvement programs.⁸²¹ A 1996 Price Waterhouse review of AusIndustry's enterprise improvement programs argued that market failure was occurring in the spread of best practice due to spillovers and the inability of small manufacturers to assess the benefits of best practice activities, leading to an underinvestment in best practice by firms. The study showed that firms

⁸¹⁷ These ideas are derived from, but are somewhat different to, the reforms suggested in ACTU/TDC Mission to Western Europe, op. cit., p.158-160.

⁸¹⁸ *Working Nation: The White Paper on Employment and Growth*, Australian Government Publishing Service, Canberra, 1994, p.28; and *Working Nation: Policies and Programs*, op. cit., p.29-32.

⁸¹⁹ John Mathews, 'Future directions in human resource management and workplace change' in Economic Planning Advisory Council, *Human Resource Management and Workplace Change*, op. cit., pp.123-127 at p.125,126.

⁸²⁰ James P. Womack, Daniel T. Jones & Daniel Roos, op. cit., p.82-84,257.

⁸²¹ Department of Industry, Science and Tourism, *Annual Report 1994-95*, Australian Government Publishing Service, Canberra, 1995, p.119,125.

participating in enterprise improvement programs formed a higher level of commitment to a range of best practice activities. Between 1990-91 and 1994-95, enterprise improvement participants achieved: total sales growth of 18 per cent, compared to 14 per cent among all manufacturers; and export growth of 63 per cent, compared to 39 per cent among all manufacturers. Given the market failure occurring in the diffusion of best practice and the benefits achieved by the program,⁸²² the study concluded that: 'ongoing Government intervention in the SME "market" for EI [Enterprise Improvement] programs is warranted...'⁸²³ Thus, these enterprise improvement programs could be recommenced as part of the Centres for the Diffusion of Key Technologies and Best Practice program suggested in the previous chapter.

Labor's Australian Best Practice Demonstration Program (ABPDP) assisted 42 companies to implement best practice and achieve substantial improvements in performance. Best practice initiatives were then demonstrated to other firms.⁸²⁴ It may be that the program could be usefully recommenced, particularly if focused on SMEs, which often have little awareness of best practice.

In the early 1990s, Labor also established the Business Networks Program, which was effective in establishing a range of networks between SMEs (and sometimes between SMEs and research agencies, tertiary institutions and/or large enterprises) to facilitate activities including procurement, product or process development, distribution, domestic and/or export marketing and after sales service. Under the program, network brokers assisted with feasibility studies and the development of the business plan and seed funding was provided for the first year of operation.⁸²⁵ At 30 June 1996, 181 networks, involving almost 900 firms, had received support under the program. Of these, 15 networks had lapsed and 166 networks were in the process of being established or were fully operational.⁸²⁶ Such funding is important because set-up costs are an important impediment to the establishment of joint initiatives.⁸²⁷ The program played an important role in fostering the networking so important to enabling SMEs to compete on the basis of innovation. Given Australia's weakness in this area, the program could usefully be recommenced.

The Government could also foster the diffusion of best practice by establishing a national network of volunteer mentors, based on the Service Corps of Retired Executives (SCORE) Association in the United States. SCORE was founded in 1964 and has 12,400 volunteer members and 389 chapters throughout the United States. Working and retired executives and business owners provide confidential counselling and mentoring to help people start and operate small businesses successfully. Volunteers also co-ordinate low-cost seminars and workshops to

⁸²² Price Waterhouse, *The Longer Term Impacts of Participation in AusIndustry Enterprise Improvement Programs: Report for the Office of AusIndustry*, Price Waterhouse, Canberra, 1996, p.i-iii,17,38,39.

⁸²³ *ibid.*, p.iii.

⁸²⁴ The improvements in work organisation achieved by the ABPDP are outlined in Department of Industrial Relations, *Best Practice in Action*, Department of Industrial Relations, Canberra, 1995.

⁸²⁵ AusIndustry, *Business Networks Program*, Department of Industry, Science and Tourism, Canberra, 1997, p.4,5,8,9,12.

⁸²⁶ Department of Industry, Science and Tourism, *Annual Report 1995-96*, *op. cit.*, p.60,61.

⁸²⁷ Australian Manufacturing Council Secretariat & McKinsey and Company, *op. cit.*, p.45,50.

provide business people with additional training on specific business topics. In 1996, almost 257,000 business people were assisted with counselling and workshops and more than one million hours were donated to help small business people.⁸²⁸ Australia does not have a comprehensive network providing mentoring support for businesses. The Federal Government should have several grant rounds to provide small amounts of seed funding to help organisations to establish such mentoring support services for businesses in their local area. For minimal short-term cost, significant on-going mentoring support for businesses could be facilitated through an Australia wide network of experienced volunteer mentors, thereby producing further diffusion of best practice.

The Government could also foster EEO by: providing sufficient resources for the Affirmative Action Agency; disseminating information on establishing EEO programs; directing the private sector to set their own, realistic targets for the increased participation of women in private sector management, corporate boards and academia and setting quotas if satisfactory performance is not achieved within 5 years;⁸²⁹ and increasing incentives for the establishment of work based child care centres.

⁸²⁸ United States Small Business Administration Homepage at 28 January 1998.

⁸²⁹ Industry Task Force on Leadership and Management Skills, *op. cit.*, p.27-29.

Chapter 11: Management

1. The Importance of Management to Competitive Advantage Based on Innovation

Skilled and experienced managers are vital to achieving competitive advantage through innovation because it is management that must oversee those innovative processes that can turn a potentially lucrative idea into a fast selling product. For example, managers must oversee R&D projects and create excellence in work organisation. Managers must also decide on the take-up of new technology, attract finance, create and maintain a skilled workforce, implement marketing plans and seek out export markets. In addition to having the skill to manage these complex processes, managers must be able to determine which ideas have commercial potential and be prepared to invest significantly, often at considerable risk, to create a successful product. It is management that must grasp the opportunities offered in a global environment in which some products and services may become quickly obsolete, while major market opportunities open up elsewhere. Firms and nations with managers that can affect continuous organisational change to get out of declining market segments, and seize export opportunities in growing segments, will achieve successful restructuring, high exports and strong growth. Firms and nations with managers that are unable to adapt to change will suffer stagnation.⁸³⁰

Management skills are thus a key determinant of the capacity to export. McKinsey's world wide research has shown that one of the critical factors that enables firms to successfully export is to have management that is pro-active and committed to innovation and change. A McKinsey/AMC report found that the leadership of a firm's top management and their commitment to exporting was one of the three key elements distinguishing high exporting firms from non-exporting firms. Management commitment is vital because export success can require much perseverance, sometimes including three to ten years of low or negative returns, before fruit is born. The report further noted that many non-exporting firms had the quality products and overall potential for achieving high exports, but did not export simply because they lacked the vision of themselves as an exporting firm.⁸³¹

Management is also crucial to restructuring. While the McKinsey report found that management skill was important in achieving exports of ETMs,⁸³² the LEK Partnership study showed that committed, passionate individuals in leadership were a highly common feature of successful service exporting firms.⁸³³

Managers, through their capacity to drive innovation, are also pivotal to achieving employment growth. A 1994 OECD paper, the *Employment/Unemployment Study*, concluded that the principle reason for the decline in employment growth throughout the OECD has been an insufficient capacity to innovate and adjust, and

⁸³⁰ *ibid.*, p.6,93,100.

⁸³¹ McKinsey and Company & the Australian Manufacturing Council Secretariat, *op. cit.*, p.17-19,57.

⁸³² *ibid.*, p.17-19.

⁸³³ LEK Partnership, *op. cit.*, p.48,56.

that the key reason for this is that management skills and education and training in all countries, bar Japan, had fallen behind the requirements of a technologically advanced economy.⁸³⁴

Thus, management skills are crucial to building innovative, export-oriented firms and therefore to restructuring, employment growth and national competitive advantage.

2. Market Failure and Australia's Weaknesses in Management

Markets fail to produce large numbers of effective managers because for individual firms, the cost of providing the education, training and experience needed to produce good managers can rarely be returned to the firm, given that managers can leave the firm.

Australia's overall management capability is poor.⁸³⁵ The Karpin report estimated how Australian enterprises were performing on a range of tasks compared to world best practice at 2010. The results were as follows:

Australia's Management Competence in a Range of Tasks: Percentage of 2010 Best Practice

Task	Small and medium sized enterprises	Large enterprises
Customer orientation	60	50
Entrepreneurship	60	30
Functional skills	50	75
General education	20	60
Global orientation	30	30
Management development	10	40
Quality commitment	30	50
Soft skills	40	30
Strategic skills	20	40

Source: Industry Task Force on Leadership and Management Skills, *Enterprising Nation: Renewing Australia's Managers to Meet the Challenges of the Asia-Pacific Century: Report of the Industry Task Force on Leadership and Management Skills: Executive Summary*, Australian Government Publishing Service, Canberra, 1995, p.7,8. Note that the figures have been read from a bar graph and rounded to the nearest five per cent.

IMD's *World Competitiveness Yearbook 1996* found that Australia's management was poor by world standards, with overall management efficiency ranked 30th of the 46 nations included in the study. Of particular concern was that Australian managers

⁸³⁴ Industry Task Force on Leadership and Management Skills, op. cit., p.94.

⁸³⁵ Industry Task Force on Leadership and Management Skills, op. cit., p.14,15 noted that a 1995 study by the Institute for Research into International Competitiveness of Australia's customers in 5 Asian nations found that Australian managers were rated a long way behind the other five competitor nations in the study (Germany, Japan, Taiwan, UK and the USA) in a range of management competencies including entrepreneurial skills, networking with businesspeople overseas, creativity in generating new business ventures and ability to explore business opportunities. Others to note the poor overall competency of Australian management include: Julian Disney, *Some Priorities for National Development - A Paper Prepared for the 'Conference on Social Justice' organised by the ACT Council of Social Service, Canberra, 2 April 1993*, Unpublished, 1993, p.14; ACTU/TDC Mission to Western Europe, op. cit., p.120; and Peter Ewer, Winton Higgins & Annette Stevens, op. cit., p.93,94.

were ranked 37th for 'entrepreneurship and innovation' and 32nd for the time they take to launch new products into the market.⁸³⁶ Indeed, there is often significant contempt for innovators and their technical abilities among Australian managers.⁸³⁷ Australian managers tend to be strongly focused on negative cost-cutting, rather than new product development.⁸³⁸

Part of the weakness of Australian management in encouraging innovation can be explained by the short-term horizons imposed by Australia's management and accounting systems, which focus on quarterly and annual returns on investment. In seeking to maximise annual returns, it can be far easier to reduce investment, rather than seeking to maximise returns, by reducing spending on activities crucial to continuing success for the enterprise. This short-term focus can be reinforced where managers receive large annual bonuses based on annual profits. Achieving and maintaining competitive advantage requires continuous innovation, which necessitates considerable investment in innovative activities. Unfortunately, this can mean that capital budgeting requirements will vary significantly from time to time. High short-term investment and debt - and ensuing low returns - are often vital to achieving longer term competitive advantage based on innovation. While Australia's firms often sacrifice investment for short-term profit, world best competitors establish a competitive advantage through further innovation. By the time Australian firms begin to lose market share, it is generally too late to regain lost ground. Thus, the short-term profit focus of our management plays an important part in the cycle of disinvestment, stagnation and business failure.⁸³⁹

Not surprisingly, lack of management skill appears to be constraining growth of high technology firms. These firms often have particular management and financing requirements given high R&D expenditures, early involvement in export markets and rapid growth. The Epsie report found that lack of management skills was constraining the growth of high technology firms because: they are often run by people with strong technical backgrounds but minimal management skills; they underestimate the importance of employing management, marketing, finance, accounting, production and administration expertise; the education system is failing to provide appropriate management training for high-technology entrepreneurs; high technology firms often have difficulty recruiting managers with the necessary skills and experience; and, managers in high technology firms can't get the finance they need to fund their rapid growth because they are reluctant to take on the equity

⁸³⁶ IMD, op. cit., p.63,511,515.

⁸³⁷ John M. Legge, *The Competitive Edge*, op. cit., p.xii,xiii.

⁸³⁸ H. Sowaga, ch.4 'The role of innovation and top management in Australian corporations - A survey of manufacturing companies' in Kyoko Sheridan (ed.), op. cit., pp.51-64 at p.53-55 reported that in his survey, only 31 per cent of Australian firms focused their management strategies on new product development compared to 55 per cent of Japanese firms, while only 12 per cent of Australian firms focused their management strategies on diversification compared to 27 per cent of Japanese firms. Typically, curtailing costs was the prime management focus among Australian firms, with almost 40 per cent having cost cutting as their prime management focus, a figure more than three times the proportion of Japanese firms that were similarly focused.

⁸³⁹ James Juniper, op. cit., p.69,70,74,75; Paul Chapman, ch.3 'Australian industry - surely not "no policy"' in Michael Costa & Michael Easson (eds), op. cit., pp.69-96 at p.70,71; and Peter Ewer, Winton Higgins & Annette Stevens, op. cit., p.60,64,65.

investors, lack the experience in framing investment proposals and often pursue inappropriate loan funds.⁸⁴⁰

The capacity of Australian management to achieve export growth also appears questionable. The 1996 IMD report found that Australia's senior managers were ranked 26th in terms of their experience in international business.⁸⁴¹ The Hughes Report found that the key reasons why most of Australia's 40,000 potential manufacturing and service exporting firms did not export was because Australia's managers lacked the knowledge and experience necessary to export and were excessively risk averse.⁸⁴² The McKinsey survey of emerging exporters also found that inadequate management skills were a significant constraint to exporting, particularly as firms grow and the range of management skills required expands.⁸⁴³

Australian managers generally have little knowledge about what best practice involves, let alone the capacity to implement it. Many view negative cost-cutting as a priority and continue with a hierarchical, adversarial approach. Few have substantially adopted key elements of best practice, such as worker empowerment, working with leading edge customers and suppliers and focusing on quality and innovation. Australian enterprises, training providers and educational institutions are moving much slower towards the implementation of the new management paradigm than many of their counterparts overseas.⁸⁴⁴

In 1994-95, only around 17 per cent of managers had tertiary business qualifications.⁸⁴⁵ Further, the Karpin report estimated that 180,000 of Australia's 400,000 front-line managers have no formal management training. This is of major concern because frontline managers are the largest group of managers numerically and are central to a firm's performance.⁸⁴⁶

Many of Australia's SMEs stagnate and fail because of a lack of management competence. Evidence outlined in the Beddall report suggested that 86 per cent of people considering whether to start a small business had not undertaken any training in managing small businesses and only one-fifth of owner/managers had a trade, technical or professional qualification that required study extending beyond a year. Many small business people appear to believe that small business advisory services and management training are not necessary nor valuable. This is a disturbing situation given that, simply to survive, small business owner/managers need a range of operational skills, such as financial planning and cash flow management, and must deal with a complex array of legislative issues such as

⁸⁴⁰ Australian Academy of Technological Sciences, *op. cit.*, p.1,11,12,17,18,37,38.

⁸⁴¹ IMD, *op. cit.*, p.518.

⁸⁴² Report of the Committee for Review of Export Market Development Assistance, *Australian Exports: Performance Obstacles and Issues of Assistance: Report of the Committee for Review of Export Market Development Assistance*, Australian Government Publishing Service, Canberra, 1989, p.40.

⁸⁴³ McKinsey and Company & the Australian Manufacturing Council Secretariat, *op. cit.*, p.52,53.

⁸⁴⁴ Industry Task Force on Leadership and Management Skills, *op. cit.*, p.3-6.

⁸⁴⁵ Industry Commission & Department of Industry, Science and Tourism, *A Portrait of Australian Business: Results of the 1995 Business Longitudinal Survey*, Australian Government Publishing Service, Canberra, 1997, p.170.

⁸⁴⁶ Industry Task Force on Leadership and Management Skills, *op. cit.*, p.33,34.

taxation, industrial relations, superannuation, workers compensation and business licensing. Evidence provided to the Beddall committee suggested that this lack of management education led to between 66 and 90 per cent of small businesses failing within five years.⁸⁴⁷ Thus, the great majority of small business owner/managers don't have the management skills to survive, let alone the skills in managing R&D, technology, work organisation, finance, marketing and exporting needed to grow into world competitive exporters in affluent market segments.

The Karpin report found that part of the reason for Australia's poor management is that the typical management education provider is substantially below best practice in virtually all areas of management education. Australia's university management schools are not effectively teaching best practice work organisation, nor the new paradigm for management and there are no world class management schools in Australia. TAFE management and small business training is also below world best standard.⁸⁴⁸

The Karpin report also found that '...while there are examples of best practice management development in Australia, overall performance is weak across large, medium and smaller enterprises.'⁸⁴⁹ The development of Australian managers was failing in a range of areas including: low levels of education and training undertaken; over-reliance on short courses; failure to handle the transition from specialist to manager; failure to link management development to strategic business direction; and failure to evaluate management development activities.⁸⁵⁰

The Karpin report concluded:

...[I]n the Task Force's opinion, most Australian managers, enterprises, education and training providers are currently a long way from world best practice... Australian management must improve significantly in the next decade if enterprises expect to even meet today's world best practice standards... [T]he evidence of Task Force consultations and research clearly indicates that the majority of Australia's managers do not have the education and skill levels of those of the major trading nations, nor are most of our educational and training institutions providing world class services.⁸⁵¹

3. Rationalism and Management

Rationalists view management as a private concern exogenous to policy making. For example, the Hughes report argued: '...[G]ood management [is]...largely a function of a competitive environment.'⁸⁵² While competition can be a useful spur to performance, the evidence above indicates that increasing competition and freeing

⁸⁴⁷ House of Representatives Standing Committee on Industry, Science and Technology, *Small Business in Australia: Report by the House of Representatives Standing Committee on Industry, Science and Technology*, Australian Government Publishing Service, Canberra, 1990, p.208-212. Industry Task Force on Leadership and Management Skills, op. cit., p.7 also found that SME managers are generally not tertiary qualified and generally do not undertake management development to any significant extent.

⁸⁴⁸ Industry Task Force on Leadership and Management Skills, op. cit., p.9,19,20,40,41.

⁸⁴⁹ *ibid.*, p.33.

⁸⁵⁰ *ibid.*, p.33.

⁸⁵¹ *ibid.*, p.6,7.

⁸⁵² Report of the Committee for Review of Export Market Development Assistance, op. cit., p.36.

markets has not brought sound management. The Labor Government generally followed rationalist approach to management, doing very little to improve it over 13 years,⁸⁵³ despite the fact that government reports had been highlighting the importance of management since the 1970s,⁸⁵⁴ and despite considerable information showing Australia's management was amongst the worst among industrialised nations. The Karpin report noted that while policymakers have focused on improving workforce skills and productivity, '...managers - whose skills can determine enterprise and economic performance - have received scant attention from analysts and policymakers.'⁸⁵⁵ Even after the Karpin report outlined the vast weaknesses of Australia's management performance, and outlined a range of initiatives that could build Australia's management capacity, Labor did little to address this key weakness in Australia's innovation chain. This rationalist 'do nothing' approach will continue to result in Australia having poor managers and a constrained ability to innovate, compete, restructure and grow.

4. Industry Policies to Foster Excellence in Management

Government action can do much to improve management. The scope for gains is significant given the importance of management and the fact that most of Australia's one million managers are performing well below world best practice.⁸⁵⁶

To overcome Australia's weakness in management education and training, the Government should adopt the Karpin report recommendation to establish a National Management School with satellite centres in at least two capital cities. It is hoped the school could achieve excellence through sound resourcing and economies of scale, attracting world class academics and students and developing close links with the top regional schools in Asia. In turn, the school could drive improvements in the quality of management education across Australia by: training the management academics of the future; advancing Australia's understanding of management by supporting quality research; developing world class management education and training curricula; fostering improved teaching; and informing other management schools of better approaches through the organisational learning that would ensue in such a facility. The national management school itself could produce numerous quality Master of Business Administration graduates for Australian enterprises and improve the continuing education of practicing managers through executive and company training.⁸⁵⁷

The quality of management education and training could be further advanced through the establishment of a professional accreditation system, which would encourage management schools to achieve minimum professional standards in their

⁸⁵³ For example, note the dearth of initiatives on management in *Working Nation: Policies and Programs*, op. cit., at p.72.

⁸⁵⁴ *White Paper on Manufacturing Industry*, op. cit., p.27; and John Crawford, Brian Inglis, R.J.L. Hawke & N.S. Currie, *Study Group on Structural Adjustment: Report*, Australian Government Publishing Service, Canberra, 1979, 7.62.

⁸⁵⁵ Industry Task Force on Leadership and Management Skills, op. cit., p.5.

⁸⁵⁶ *ibid.*, op. cit., p.13.

⁸⁵⁷ *ibid.*, p.42,45,46.

course offerings and provide a quality assurance indicator for prospective students. Financial incentives to improve quality could also be provided.⁸⁵⁸

The quality of management education could be further encouraged by providing additional funding for applied research, particularly by way of PhD scholarships at the proposed national school. This would provide a higher level of training for many management students and produce more research on specifically Australian management issues for enterprises and managers.⁸⁵⁹

Increased funding for curriculum development and dissemination is also required.⁸⁶⁰ Particular emphasis should be placed on exporting (a recommendation of the Hughes report),⁸⁶¹ best practice work organisation, the new paradigm for management and the basis for competitive advantage in the modern economy. Management and accounting systems that facilitate adequate investment in innovative activities, rather than encourage disinvestment aimed at short-term profit, should form part of such curricula.

Reforming TAFE management training is also vital because it is the largest provider of management education and training in Australia and is performing below world best standard. To improve TAFE management training, government could: foster the professional development of senior TAFE managers, focusing on their responsibility for leading the reform required in their colleges; provide financial incentives to TAFE institutions to improve their quality; fund the professional development of TAFE staff to provide them with the skills to create and deliver management development programs; and fund the establishment of an articulated TAFE/University course in small business formation and management and ensure its availability to students throughout Australia.⁸⁶²

Given the importance of high technology enterprises, their extensive management needs, and the weaknesses of their current management, particular emphasis could be placed on developing training programs for high technology entrepreneurs. Such courses would need to emphasise marketing, finance, small business management, patent strategy and, in particular, how to deal with early involvement in export markets and rapid growth.⁸⁶³ This could be a key focus of a reactivated enterprise improvement program. Comprehensive, specialist degree or diploma courses in managing high technology enterprises could also be developed.

Small business management training also needs to be given high priority as, firstly, many small businesses fail largely due to lack of management skills and secondly, some small businesses produce considerable innovation, exports and employment. Comprehensive accreditation processes for small business trainers, educators, counsellors and advisers could improve the quality of such (currently poor) training

⁸⁵⁸ *ibid.*, p.44,46.

⁸⁵⁹ *ibid.*, p.46.

⁸⁶⁰ *ibid.*, p.49.

⁸⁶¹ Report of the Committee for Review of Export Market Development Assistance, *op. cit.*, p.xxx.

⁸⁶² *ibid.*, p.21,25.

⁸⁶³ Australian Academy of Technological Sciences, *op. cit.*, p.18.

and provide small business with a sound method of identifying suitable training.⁸⁶⁴ The Government could also act to overcome the reluctance of small business owner/managers to seek advice for small business problems by providing small business owner/managers with a certificate of entitlement to purchase accredited one-to-one advising, with the aim of encouraging the long-term use of professional advisers in solving business problems and developing management skills.⁸⁶⁵ Finally, the Government could more substantially adopt the recommendation of the Beddall report to include management subjects as an option at the secondary education level, in apprenticeships and in professional education at the tertiary level. This would introduce to students the possibility of establishing a small business as a career path and improve their management skills should they do so. It would also assist to remedy the situation where, at present, many people in professions and trades set up their own business, despite having few management skills.⁸⁶⁶

To address the grave lack of management development occurring in Australian enterprises, the Government could implement the recommendation of the Karpin report that Australia's untrained managers be provided access to what the report calls the *National Certificate in Workplace Leadership*, to be delivered by TAFE.⁸⁶⁷ Such a course would teach the basics of world best practice management including exporting, innovation, best practice work organisation and managing diversity. Completion of the course would provide credits towards the completion of more extensive training such as MBAs. It would be hoped that most of Australia's untrained managers would have completed this course within several years and that many were encouraged to do further tertiary education and training.⁸⁶⁸

It seems likely that the implementation of these management reforms would be a sound investment towards taking Australian management from being among the industrialised world's worst to among its best, thereby spreading best practice work organisation across the economy and fostering national competitive advantage based on restructuring toward innovative, high quality, high value-added products and services.

⁸⁶⁴ Industry Task Force on Leadership and Management Skills, op. cit., p.22.

⁸⁶⁵ *ibid.*, p.23.

⁸⁶⁶ House of Representatives Standing Committee on Industry, Science and Technology, op. cit., p.212,213.

⁸⁶⁷ Industry Task Force on Leadership and Management Skills, op. cit., p.33,34.

⁸⁶⁸ *ibid.*, p.38.

Chapter 12: Education and Training

1. The Importance of Education and Training to Competitive Advantage Based on Innovation

Michael Porter's international study found that:

There is little doubt from our research that education and training are decisive in national competitive advantage. The nations we studied that invest the most heavily in education (Germany, Japan, and Korea) had advantages in many industries that could be traced in part to human resources. What is even more telling is that in every nation, those industries that were the most competitive were often those where specialized investment in education had been unusually great... Education and training constitute perhaps the single greatest long-term leverage point available to all levels of government in upgrading industry.⁸⁶⁹

Lester Thurow has argued: '... [I]n the twenty-first century, the education and skills of the workforce will end up being the dominant competitive weapon.'⁸⁷⁰ Similarly, Cohen and Zysman argued: 'The skill base of a nation and how it's employed is likely to be a decisive factor in determining national competitiveness.'⁸⁷¹ Numerous studies have also concluded that education is an important determinant of economic growth.⁸⁷²

Education and training are pivotal to achieving product and process innovation. In particular, education and training is important to gaining the potential innovation and productivity benefits offered by new technologies. To apply the process technologies vital to producing new products and increasing efficiency, the education and training levels of the great majority of the population will need to be substantially increased. For example, as information technologies are integrated into production processes throughout the economy, office, factory and retail workers will need to be able to apply such technology. Those nations in which workers are well trained to apply new process technologies will achieve rapid innovation. In an environment in which capital, natural resources and product technologies will move around the world with ever increasing ease, people will become an increasing source of competitive advantage.⁸⁷³

Education and training also facilitates restructuring because building a large pool of skilled employees facilitates the growth of brain-based, technology-intensive sectors, particularly ETMs and advanced services.⁸⁷⁴

⁸⁶⁹ Michael E. Porter, *op. cit.*, p.628.

⁸⁷⁰ Lester Thurow, *Head to Head*, *op. cit.*, p.40.

⁸⁷¹ Stephen S. Cohen & John Zysman, *op. cit.*, p.228.

⁸⁷² Bureau of Industry Economics, *Recent Developments in the Theory of Economic Growth*, *op. cit.*, p.16,36. See also the discussion of the literature in Ross Williams 'Funding Higher Education in Australia', p.5-7 in Higher Education Financing and Policy Review Committee, *op. cit.*, Appendix 14.

⁸⁷³ Lester Thurow, *Head to Head*, *op. cit.*, p.51,52,54; and Stephen S. Cohen & John Zysman, *op. cit.*, p.228.

⁸⁷⁴ Stephen S. Cohen & John Zysman, *op. cit.*, p.230. Michael E. Porter, *op. cit.*, at p.256,257 stated that a nation's stock of specialised, skilled professional and technical workers was often crucial in international service competition. Business services in particular required highly trained workers in management, engineering and scientific fields. *LEK Partnership*, *op. cit.*, p.50 noted that education and training is a key factor facilitating

Furthermore, as Porter's study found: 'A system for vocational, technical and specialized industry training is a central priority in any advanced economy.'⁸⁷⁵ In particular, government should encourage many of the nation's most intelligent people to devote themselves to creating new products and services.⁸⁷⁶ As Porter has written: 'Training the most promising young people in science and engineering is unusually beneficial to an economy because it provides the greatest spur to innovation.'⁸⁷⁷ The strong engineering tradition in successful industrial nations such as Sweden, Germany, and Japan shows that engineers are of particular importance because of their role in tying together research and industry by applying science to production.⁸⁷⁸ Strong investment in education and training is also needed in other areas of the innovation chain, such as marketing, management and exporting.

While investment in universities is important, the education and training levels of those not attending university is a vital determinant of national competitiveness. It is vital that the great majority of people not attending university undertake vocational education and training at both the secondary and tertiary levels.⁸⁷⁹ Competitive advantage in sophisticated sectors requires that the great majority of workers have advanced skills.

Nations can make large returns on their investment in education. Thurow, writing about the United States, noted:

...the difference in median wages between those with and those without education (\$28,747 for a white male high school graduate and \$42,259 for a white male college graduate) indicates big differences in average productivity and a huge direct social payoff when those educational investments are averaged across millions of workers.⁸⁸⁰

Finally, higher education is important because it can deliver considerable export income. Even despite all the difficulties experienced by the sector, the education industry grew to become a major export earner under Labor. The number of fee paying overseas students in Australia grew from 7,100 in 1987 to 143,000 in 1996. In 1996, 53,200 foreign full fee paying students undertook higher education courses at publicly funded institutions. Education exports grew rapidly and reached \$3 billion in 1996. The strong growth in international student numbers is expected to continue.⁸⁸¹

significant services exports among leading service export nations, such as Hong Kong, Singapore and the Netherlands. Bill Mansfield, *op. cit.*, p.200-201 argued that education and training is vital to bringing a high wage, high skill, high value-added economy. *White Paper on Manufacturing Industry*, *op. cit.*, p.29-32 argued that investing in training in areas of future growth could speed adjustment to a more economically rewarding industry structure.

⁸⁷⁵ Michael E. Porter, *op. cit.*, p.630.

⁸⁷⁶ Lester Thurow, *Head to Head*, *op. cit.*, p.52.

⁸⁷⁷ Michael E. Porter, *op. cit.*, p.114.

⁸⁷⁸ Jenny Stewart, *op. cit.*, p.127,128.

⁸⁷⁹ Michael E. Porter, *op. cit.*, p.629,630; and Lester Thurow, *Head to Head*, *op. cit.*, p.275,276.

⁸⁸⁰ Lester Thurow, *The Future of Capitalism*, *op. cit.*, p.285.

⁸⁸¹ Higher Education Financing and Policy Review Committee, *op. cit.*, p.12,100,101.

2. Market Failure and Australia's Weaknesses in Education and Training

There is obviously market failure in the provision of education and training. Competing internationally in advanced sectors requires a workforce with high quality primary, secondary and tertiary education and training. Due to labour turnover, firms could rarely capture the full benefits of providing such education to people. Indeed, there is even market failure in firm specific training for the same reason. While it may be rational for an individual firm not to provide training in this environment, collectively, such an approach will produce insufficient skill formation to maximise the growth of the economy.⁸⁸² Thus, governments must play the key role in providing primary, secondary and tertiary education and may need to encourage firms to undertake firm specific training.

In Australia, the rationalist decree of small government has led to insufficient investment in secondary education. Under the strain of severe fiscal stringency, State and Territory Governments have struggled to fund secondary schools adequately enough to provide the basis of an internationally competitive workforce. The school system is not providing the basic skills and competencies upon which further education and training can be built for a significant number of young people. In particular, vocational education in secondary schools is under-developed by international standards. These are major competitive disadvantages because studies have shown that countries that have been able to provide sound education for the bulk of students in language, maths, science and other general education topics, and which provide comprehensive vocational training, tend to have a superior productivity performance.⁸⁸³

Labor also under-invested in higher education. While the numbers in higher education were almost doubled,⁸⁸⁴ a magnificent achievement, few extra resources were provided to the sector. In 1988, the Dawkins White Paper recognised the '...urgent need to refurbish and upgrade many existing facilities, particularly on inner-urban campuses',⁸⁸⁵ yet extra funding commensurate with rises in participation was not provided. Federal Government operating grants for higher education rose from \$3.1 billion to \$4.6 billion between 1983 and 1996 (in constant 1997 dollars). Net of the HECS liability, the rise was from \$3.1 billion to \$3.7 billion,⁸⁸⁶ which is a decline in expenditure relative to GDP. Commonwealth expenditure on higher education as a percentage of GDP, at 1.1 per cent (including HECS payments and liabilities) in 1996, is roughly average by OECD standards and nine nations spend more.⁸⁸⁷

⁸⁸² Lester Thurow, *Head to Head*, op. cit., p.274,275.

⁸⁸³ Committee on Employment Opportunities, *Restoring Full Employment: A Discussion Paper*, Australian Government Publishing Service, Canberra, 1993, p.81,82,88,89.

⁸⁸⁴ Australian Labor Party, *Shaping the Nation: Achievements of the Labor Government*, Australian Labor Party, Canberra, 1995, p.67; and Higher Education Financing and Policy Review Committee, op. cit., p.97.

⁸⁸⁵ Department of Employment, Education and Training & John Dawkins, op. cit., p.83.

⁸⁸⁶ Higher Education Financing and Policy Review Committee, op. cit., p.116

⁸⁸⁷ Ross Williams, 'Funding higher education in Australia' in Higher Education Financing and Policy Review Committee, op. cit., Appendix 14, p.7-9.

Compounding this insufficient public investment is the fact that there has been no large scale private equity investment in higher education in Australia.⁸⁸⁸

The rationalist desire for expenditure cuts has reduced equity and access in higher education via: excessive tightening of eligibility for Austudy, which is denied to many prospective students in difficult financial circumstances; the gradual move to up front fees for certain courses; and insufficient public investment in education. The result has been that many prospective students can no longer afford university and, in each year from 1985 to 1996, between 30,000 and 100,000 qualified students have been denied a place in higher education.⁸⁸⁹ Working class people, Aboriginal and Torres Strait Islanders, women and migrants from non-English speaking backgrounds have long been denied equal opportunity to quality secondary and tertiary education.⁸⁹⁰ While Labor increased the absolute numbers of people from disadvantaged groups in higher education, the relative proportions of people from different socio-economic groups remained little changed, apart from a modest improvement on extreme disadvantage in the case of people from Aboriginal and Torres Strait Islander backgrounds. Rates of completion of year 12 also remain significantly lower for young people from low socio-economic backgrounds than for those from high socio-economic backgrounds.⁸⁹¹ By denying access to education, Australia has reduced its pool of skill and talent, and thereby reduced national economic progress.⁸⁹²

The quality of teaching provided to higher education students has also declined. This is primarily because higher education funding has not risen in the same proportion as the growth in student numbers. The 1993 Green Paper on Employment stated that 'universities are under-resourced for undergraduate teaching, with the result a decline in quality of course provision.'⁸⁹³ Further, while Australian institutions have many outstanding academics, a significant minority of lecturers are poor teachers. A key reason for this is that most lecturers are never taught to teach and some therefore lack the necessary skills. Some lack effective oral communication skills and the great majority of lecturers do not provide well structured, detailed lecture notes. Others, protected by tenure, are complacent or disinterested after decades in the sector. Some academics also place minimal priority on teaching, viewing it as an unwelcome distraction from their research work. This may partly reflect the fact that, while research excellence is rightly accorded high status and is financially rewarded, minimal status and few, if any, financial rewards are provided to gifted teachers. Grants allocated through the Committee for University Teaching and Staff Development are about \$7 million per year, compared with \$410 million allocated for competitive and peer reviewed research and \$220 million allocated under the Research Quantum.⁸⁹⁴ Thus, teaching quality is suffering from insufficient funding

⁸⁸⁸ Higher Education Financing and Policy Review Committee, op. cit., p.24.

⁸⁸⁹ *ibid.*, p.97.

⁸⁹⁰ See John S. Western, *Social Inequality in Australian Society*, MacMillan, Melbourne, 1983, pp.49-60,137-148,212-217,262-270.

⁸⁹¹ Higher Education Financing and Policy Review Committee, op. cit., p.3,20.

⁸⁹² This was recognised in Department of Employment, Education and Training & John Dawkins, op. cit., p.7.

⁸⁹³ *ibid.*, p.80.

⁸⁹⁴ Higher Education Financing and Policy Review Committee, op. cit., p.19.

and a minority of lecturers provide poor teaching due to lack of skills, incentive and motivation.

A further weakness in the higher education sector is that too little of Australia's research effort is directed to meeting industry needs, a matter discussed in detail in chapter eight.

The higher education system is also producing few graduates able to provide policy advice on creating an internationally competitive economy. Much of the current teaching of economics at university involves unrealistic models and mathematical equations that conclude that a market allocation of resources maximises economic welfare. Economics students receive little knowledge about industry policy (beyond why it inevitably fails), the practical realities confronting businesses, nor the keys to international competitive advantage. During this temporary hegemony of rationalist economics, such students are often highly regarded and become policymakers in key bureaucratic posts. Not surprisingly, they have been unable to produce policies to substantially foster international competitiveness. This is compounded by the fact that public and private providers of industry policy often have no practical training in the area.

Australia's under-developed vocational education and training (VET) system is a further significant competitive disadvantage. Labor admitted in *Working Nation* that Australia has one of the lowest rates of participation in secondary school level vocational education in the OECD.⁸⁹⁵ Only from the early to mid 1990s were all State and Territory Governments taking significant steps to integrate vocational education into the secondary curriculum.⁸⁹⁶ At the tertiary level, the 1993 Green Paper on Employment noted that only 20 per cent of young Australians were getting a vocational (non-university) education, compared with the OECD average of around 50 per cent.⁸⁹⁷ Employers stress that the public system is: not meeting their needs; far from international standards; not well directed toward the present and emerging skill needs of the economy; and too slow in adjusting training to match changes occurring in technologies, products and services.⁸⁹⁸

Australia is a long way behind world leaders in VET. For example, more than a decade ago, West Germany committed themselves to providing a training place for every school leaver who wanted one and had nearly met the goal. Of those finishing the first level of secondary school at 15 or 16 years old, 60 per cent entered the 'dual system' involving in-plant paid training provided by employers and school based training provided by government, 10 per cent went into full-time vocational training and only 20 per cent studied to enter universities or colleges. After three years, those in the dual system become 'journeymen' with known skill levels. After a further 3 years work and additional courses in law, technology and business management,

⁸⁹⁵ *Working Nation: Policies and Programs*, op. cit., p.90.

⁸⁹⁶ Australian Labor Party, *Shaping the Nation*, op. cit., p.67; and *Working Nation: Policies and Programs*, op. cit., p.91-93.

⁸⁹⁷ Committee on Employment Opportunities, *Restoring Full Employment*, op. cit., p.75.

⁸⁹⁸ Pappas, Carter, Evans & Koop/Telesis, op. cit., p.67,68; and Committee on Employment Opportunities, *Restoring Full Employment*, op. cit., p.82.

they can become a 'master', a credential necessary to open one's own business. This training system is a key source of competitive advantage in Germany.⁸⁹⁹ Recognising the importance of VET to national competitiveness, many OECD nations have built up strong vocational systems.⁹⁰⁰

Industry provision of training is low by international standards.⁹⁰¹ Apart from a small number of large firms, there are very few firms that provide regular training. Managers tend to view training as having little value.⁹⁰² Thus, most employees gain skills through experience on the job, without a planned program of training and skills development.⁹⁰³ This is occurring at a time when the skills required to be an internationally competitive workplace are higher than ever before and rising.

Australia has one of the lowest rates of participation in apprenticeships in the OECD.⁹⁰⁴ The 1993 Green Paper on Employment noted that both the apprenticeship and Australian Traineeship System are flawed because: there are too few places; many occupations and industries are not covered; employers generally choose only the most advantaged students, leaving few opportunities for most young people; employers reduce places significantly in difficult economic periods; both systems largely exclude people older than 20; participation by women in apprenticeships other than hairdressing is very low; apprenticeships have traditionally been directed to people doing the boring or unpleasant work, rather than acquiring specific skills; traineeships have low status among young people and employers and drop-out rates have been high; and traineeships have been insufficiently focused on industry needs.⁹⁰⁵

National competitiveness is also being impeded by the large percentage of the population with inadequate English language skills.⁹⁰⁶ Around one million adults have difficulty with basic reading and writing tasks. The Office of Multicultural Affairs found that a lack of English language skills is the most important reason that people from a non-English speaking background are unable to access training, retraining or better employment opportunities.⁹⁰⁷ Too little English language training is being provided even though around 55 per cent of Australia's manufacturing employees are born overseas. *The Global Challenge* report noted that the total cost of adult illiteracy was over \$3 billion per annum.⁹⁰⁸

Finally, Labor under-invested in labour market programs. In the 1980s, rationalist policies, combined with globalisation, produced significant structural displacement, but Labor's labour market programs were insufficient to enable many displaced

⁸⁹⁹ Lester Thurow, *Head to Head*, op. cit., p.54,55.

⁹⁰⁰ Jim Kitay & Russell D. Lansbury, op. cit., pp.17-72 at p.46,47,71.

⁹⁰¹ Committee on Employment Opportunities, *Restoring Full Employment*, op. cit., p.74,75.

⁹⁰² ACTU/TDC Mission to Western Europe, op. cit., p.120.

⁹⁰³ Jim Kitay & Russell D. Lansbury, op. cit., p.47.

⁹⁰⁴ *Working Nation: Policies and Programs*, op. cit., p.90.

⁹⁰⁵ Committee on Employment Opportunities, *Restoring Full Employment*, op. cit., p.78.

⁹⁰⁶ Report of the Committee for Review of Export Market Development Assistance, op. cit., p.36.

⁹⁰⁷ Committee on Employment Opportunities, *Restoring Full Employment*, op. cit., p.86.

⁹⁰⁸ Pappas, Carter, Evans & Koop/Telesis, op. cit., p.65,66.

people to return to work quickly. Between 1984 and 1990, 1.5 million jobs were created but long-term unemployment fell by only 90,000. After the recession, between three and four hundred thousand people were long-term unemployed.⁹⁰⁹

Insufficiently active labour market programs reduced national competitiveness and growth for three key reasons. Firstly, people who are unemployed for long periods often experience psychological and physical decline, and poverty. Under harsh social circumstances, some people commit crime, turn to alcohol or other drugs, experience family breakdown and some, tragically, kill themselves. People experiencing harsh economic and social conditions cannot readily form the workforce of new, internationally competitive firms. Secondly, because people in such circumstances can become effectively detached from the workforce, growth is reduced because employers take longer to fill vacancies. Finally, where a large pool of long-term unemployed people are effectively detached from the workforce, skill shortages and pressures for wage increases emerge even though unemployment may still be quite high.⁹¹⁰

3. Rationalism and Education and Training

The rationalist desire for small government has led to a view of education as a welfare reducing cost to be minimised, rather than a vital investment directed to achieving international competitiveness. As noted above, insufficient public investment has resulted in many weaknesses in the system, including: qualified students being denied places; prospective students being unable to afford education; falling quality in education provision; an education system that does not meet industry needs; and a gravely under-developed VET sector. This under-investment has slowed the pace of restructuring to brain-based, innovative sectors, lowered national competitiveness and slowed economic and employment growth.⁹¹¹

4. Industry Policies to Foster Excellence in Education and Training

Reforms to education and training should begin with a significant increase in funding for public secondary schools. Even the Labor Government's modest performance in the area, involving a \$3 billion plus allocation to the States to supplement their funding on schools, illustrated what government can achieve in education policy, even despite the mediocre allocations by the States (partly caused by low Federal Government grants to the States). Year 12 retention rates rose from 36 per cent in 1983 to around 78 per cent a decade later.⁹¹² However, such rates should be near to 100 per cent. Individuals who do not complete secondary education generally face a life of limited opportunity and nations in which a large proportion of

⁹⁰⁹ *Working Nation: Policies and Programs*, op. cit., p.108,110.

⁹¹⁰ The latter two reasons are from *Working Nation: Policies and Programs*, op. cit., p.107.

⁹¹¹ Higher Education Financing and Policy Review Committee, op. cit., p.1 notes that many submissions to the West Committee argued that funding levels over the last 15 years had impeded the capacity of institutions to fulfil their roles in contributing to national economic and social progress. Submissions from employers and employer organisations consistently argued that universities were not producing the graduates business need to create competitive advantage.

⁹¹² Australian Labor Party, op. cit., p.68.

students do not complete secondary education will face economic decline. Significant funding increases should be provided to: improve year 12 retention rates; improve the quality of education provided in many currently underfunded public schools; provide improved income support to students from disadvantaged backgrounds; and build up a significant vocational component in secondary schools.

The Government should also aim to create a world class tertiary education system in order to foster national competitiveness by providing higher quality teaching to many more Australian students. A secondary, but important benefit of a world class tertiary system is that it could achieve strong export growth. The reforms suggested below are directed to these goals.

Government will need to be the primary source of increased investment in education. Student contributions should remain at approximately the level they were at the end of the Keating Government. At that time, they were at a modest level and repayments were not required until students were making approximately average weekly earnings. Such a HECS framework brought a solid contribution from students without significantly impeding equity and access. The Government could also encourage the private sector to invest in higher education. Options that could be explored include: offering matching funding for private investment in new institutions; providing subsidies to encourage venture capital investment in post-secondary education; and providing generous tax treatment for donations to tertiary institutions.⁹¹³

Government must also do more to increase participation in higher education. Labor demonstrated what governments can achieve by increasing the numbers in higher education from 340,000 in 1982⁹¹⁴ to 634,000 in 1996. Further, in 1996, 1.35 million students enrolled in vocational programs within the VET sector at some point in the year and a further 390,000 enrolled in personal enrichment courses.⁹¹⁵ However, even after a decade of significant progress, only 17 per cent of 17 to 19 year olds and 15 per cent of 20 to 24 year olds were participating in higher education in 1995.⁹¹⁶ To become an internationally competitive economy, participation in tertiary education must be radically increased through greatly increased public investment and reform.

To increase the pool of talent and skill in the economy, Government must address Australia's historical denial of equal opportunity to education to disadvantaged groups. A range of reforms can foster equity. The eligibility criteria on Austudy could be loosened so that all people in difficult financial circumstances could afford to attend tertiary education. HECS fees could be set at a level that did not deter students from studying by the prospect of massive debt. All up-front tertiary fees could be abolished (including in the TAFE sector). Finally, universal access to HECS loans could be provided and students given the option to defer the payment of tuition fees until they earn at least average weekly earnings.

⁹¹³ Higher Education Financing and Policy Review Committee, *op. cit.*, suggested the latter two options at p.27,34,35.

⁹¹⁴ Australian Labor Party, *op. cit.*, p.67.

⁹¹⁵ Higher Education Financing and Policy Review Committee, *op. cit.*, p.97.

⁹¹⁶ *ibid.*, p.15.

The higher education sector should be more strongly focused on fostering national competitiveness and restructuring, as the 1988 Dawkins White Paper argued. This requires: a particular focus on science, technology, engineering, information technology, business and management studies;⁹¹⁷ and maintaining a commitment to humanities so as to provide industry with workers with strong research, analytical, conceptual and communication skills and to ensure we retain a pool of people who can critique and improve our economy and society.⁹¹⁸

A number of other reforms could improve the quality and efficiency of higher education. In particular, the Government should encourage institutions to specialise in areas of excellence. The 1988 Dawkins White Paper sensibly argued that providing funding to institutions on the basis of tradition to provide a full range of courses should give way to the provision of funding for both teaching and research on the basis of merit and demonstrated capacity.⁹¹⁹ It concluded:

Institutions that attempt to cover all areas of teaching and research compromise their ability to identify, and build on, areas of particular strength and the achievement of areas of genuine excellence. The ultimate goal is a balanced system of high quality institutions, each with its particular areas of strength and specialisation but co-ordinated in such a way as to provide a comprehensive range of higher education offerings.⁹²⁰

This policy should be intensified, given that such specialisation is yet to be achieved. Specialisation could facilitate higher quality education and export growth as faculties attracted the best talent and achieved economies of scale. Progress in curriculum development, research, innovation in teaching methods and course quality might be expected to rise. The ultimate goal would be for Australia to have a handful of large, world class centres of excellence for each faculty amongst its institutions nationwide. This policy would need to be tempered to cater to the reality that many students are unwilling to move States to undertake education and therefore will alter their course choices even if it means reduced individual and national prosperity. For this reason, students would need to be able to choose from comprehensive course offerings from among the institutions in their State.

Government could improve the quality of teaching by providing more resources to ensure quality staff can be employed and class sizes are not too large. Further, lecturers should be taught to teach. Just as prospective lawyers are required to complete a General Diploma of Legal Practice, all prospective lecturers should be required to complete a practical one year diploma course in best practice teaching methods. Teacher training courses also need to be more widely available for incumbent academics. Finally, mechanisms are also needed to manage under-performing academics. Where academics are under-performing they should be given access to training and counselling to improve their performance. Where they fail to respond after a reasonable period of time, they should be sacked.

⁹¹⁷ Department of Employment, Education and Training & John Dawkins, *op. cit.*, p.8,17.

⁹¹⁸ *ibid.*, p.8,9.

⁹¹⁹ Department of Employment, Education and Training & John Dawkins, *op. cit.*, p.28.

⁹²⁰ *ibid.*, p.28.

The Government could also increase the quality of course content and lower costs by providing, on a competitive basis, funding for consortia of academics from throughout the nation to establish curricula in particular fields. By having the best minds in each field collaborate on curriculum development, rather than having each academic producing curricula separately, higher quality course content and learning outcomes would be achieved.

Serious consideration could also be given to giving students the option of completing semester subjects over the summer break because it could: increase course completion rates and thereby free up places for more students; increase efficiency by utilising facilities currently left dormant over the summer; reduce foregone income for students; and increase the amount of students graduating per public dollar expended.⁹²¹

Reforms to higher education research could also ensure the sector played a much greater role in fostering competitive advantage. Ideas for research policy were presented in chapter eight.

The Government must also explore new modes of teaching. An information and communications revolution, is facilitating delivery of education courses in ways that may make traditional methods obsolete. In particular, the Internet, because it is a location independent and low cost form of communication, and facilitates delivery of courses across the world, may make lecturing in large, costly lecture halls an increasingly obsolete method of teaching. While these developments could constitute a threat to existing institutions if they fail to change, they could also constitute an opportunity to provide quality education to many more Australians and to increase education exports. Providing courses on the Internet produces a number of advantages. Courses can be provided to large numbers of students domestically and internationally at a relatively low cost. Web based technologies also provide opportunities for improving the effectiveness, and reducing the cost, of the distribution of materials, student testing and assessment, administration and marketing. Because of the potential scale involved, markets can be highly segmented in terms of price, quality and product differentiation. The on-line education industry is growing rapidly in the United States. In 1996, US\$162 million was invested by venture capital firms in new on-line education businesses. Listed education software and services firms have a market capitalisation of US\$5 billion. In 1996, turnover in on-line courses in the public domain was estimated to be US\$90 million and growing at 100 per cent per annum.⁹²²

Therefore, the Federal Government cannot afford to provide barely enough money to maintain existing teaching methods. They should capitalise on this window of opportunity by providing grants to Australian higher education institutions on a competitive basis to develop the teaching of higher education courses to domestic and international students on the Internet. This could increase the quality and

⁹²¹ The widespread introduction of summer terms was foreshadowed in Department of Employment, Education and Training & John Dawkins, *op. cit.*, p.85.

⁹²² Higher Education Financing and Policy Review Committee, *op. cit.*, p.2,9-11.

quantity of education provided to Australian students and achieve significant export growth.

The Government also needs to ensure that the higher education system teaches a significant pool of graduates about industry policy. Two key reforms are required. Firstly, tertiary economics curricula need to be radically transformed so that students gain a comprehensive understanding of industry policy, are encouraged to explore the ways active industry policies could increase competitiveness, understand the keys to international competitive advantage and appreciate the importance of public investment in areas such as R&D, technology, finance, education, management, marketing and exporting. Secondly, degrees and diplomas specialising in policy development and program delivery in industry policy must be established to ensure programs are well-conceived and effectively implemented.

To meet industry needs, Australia must establish a world class VET system. National competitive advantage is dependent on ensuring that most of the great majority of people who do not attend university, undertake VET. To become a competitive economy, Australia must radically increase the supply of vocational training places in each of the pathways to training, namely school, TAFE, private providers and industry. The Government should seek to establish a system similar to that of Germany's system, where approximately 60 per cent of students commence vocational education and training in secondary school and such courses are linked to tertiary education and training and provide those skills needed by industry. This could build on Labor's establishment and expansion of the Australian Vocational Certificate Training System (AVCTS), a structured national system of entry level training, which provided access to post-secondary vocational courses through a range of learning pathways, combining education, training and work experience.⁹²³ Finally, to encourage rising demand for vocational courses, students in the tertiary vocational stream should be allowed to defer fees through HECS for courses leading to qualifications at the Associate Diploma or Diploma level.⁹²⁴

Much more also needs to be done to encourage employers to invest in training. Porter's study revealed that one of six characteristics of education policy most conducive to creating competitive advantage was that firms invest heavily in ongoing in-house training, individually or through industry associations.⁹²⁵ Options to achieve this include: greater incentives to employers to take on apprentices and trainees, particularly during recessions; increasing the role of Group Training Companies in facilitating training, particularly in the small business area; engaging industry in managing the system and ensuring the system meets industry needs; building on progress made in expanding apprenticeships and traineeships beyond traditional 'male' areas to embrace all significant occupations, including those with lower skill levels and those dominated by women;⁹²⁶ improving the national

⁹²³ Australian Labor Party, *op. cit.*, p.66.

⁹²⁴ Committee on Employment Opportunities, *Restoring Full Employment*, *op. cit.*, p.87.

⁹²⁵ Michael E. Porter, *op. cit.*, p.629,630.

⁹²⁶ This was a recommendation in Australian Council of Trade Unions, *ACTU Presentation: - Federal Government Meeting on Youth Unemployment: The Carmichael Reform of Vocational Education and Training*, Unpublished, 1992, p.2.

recognition and portability of training; and continuing with the training wage established by Labor,⁹²⁷ where it leads to a recognised qualification.

The Government could also foster the establishment of skills based career structures, linked to competency based training as pioneered in the metal industry in 1996. This encourages skill acquisition because workers are given a path to move through the classification structure via the attainment and use of skills. Such training also helps ensure workers gain the precise skills needed for establishing competitive enterprises in their sector.

Government could also raise competitiveness by expanding English language training. While the Labor Government provided significant resources to encouraging the acquisition of basic language skills by workers at risk of displacement through the Workplace English Language and Literacy Program,⁹²⁸ a huge pool of Australians, many long-term unemployed, are still to acquire sound English language skills.

Finally the Government should establish comprehensive, active labour market programs. Labor did eventually show the way in *Working Nation* in 1994. The key aim of the package was to ensure that unemployed people were given access to training and/or employment and therefore hope, rather than were passively unemployed and in despair. For those unemployed for more than 18 months, the *Job Compact* was to provide more intensive case management, combined with assistance such as training and voluntary work, a job for six to twelve months (achieved through payment of significant wage subsidies to employers), and access to informal on-the-job training and in some cases structured and accredited training. This aimed to provide the skills, confidence, financial independence and track record necessary to gaining further employment.⁹²⁹

Other impressive components of *Working Nation* labour market reforms included: the establishment of the training wage, available to adults for the first time, which encouraged the taking on of unemployed people and provided them with a certificate of competency under the AVCTS or the equivalent certificate of competency applying in their industry; case management linked to assistance such as vocational training, remedial training, employment programs and voluntary work for newly unemployed people assessed as 'at a high risk of long-term unemployment'; the Youth Training Initiative, which involved case management for all unemployed people under 18 years of age and doubled the number of places in labour market or vocational training,⁹³⁰ and intensive assistance for disadvantaged job seekers.⁹³¹ In an environment of rapid structural change and displacement, such active labour market policies should be pursued with attention focused on ensuring that quality training is provided. Training should be linked to the wider entry level training system so that people can count such training towards the achievement of a

⁹²⁷ *Working Nation: Policies and Programs*, op. cit., p.34,100-102.

⁹²⁸ *ibid.*, op. cit., p.104.

⁹²⁹ *ibid.*, op. cit., p.115-117,119.

⁹³⁰ *Working Nation: The White Paper on Employment and Growth*, op. cit., p.12-14.

⁹³¹ *Working Nation: Policies and Programs*, op. cit., p.112,120,121,135-138.

recognised training qualification and case managers should, where appropriate, recommend that long-term unemployed people enter tertiary education and training, given that it is a key to individual prosperity and national competitive advantage.

Chapter 13: Finance

1. The Importance of Finance to Competitive Advantage Based on Innovation

Finance is a critical link in the innovation chain. In sophisticated market segments, retained earnings are often insufficient to finance the investment needed to commercialise innovative ideas. Finance is crucial in three contexts. Firstly, innovative start-up firms must often make significant investments – for example in R&D, applying for patents, taking on employees and establishing the company premises – at a time of little or no sales revenue. Secondly, major investments in marketing and distribution are needed when breaking into new export markets. As the McKinsey report found, the process of ETM exporting generally involves 3 to 10 years of low or negative returns, with finance proving a major constraint.⁹³² Thirdly, competitive advantage in sophisticated product segments depends on producing superior products or services, meaning high short-term investments are often needed to facilitate the process of continuous innovation. Thus, only through adequate provision of finance can innovative firms start-up, grow and export.

In particular, dynamic high growth SMEs (HGSMES) often need access to equity finance. As significant investment is required to facilitate their rapid expansion, HGSMES often have insufficient cash flow to make the regular repayments required in debt finance arrangements. Thus, the widespread provision of equity finance to HGSMES, at the start-up, development and growth stages of their development, is a key to achieving growth and exports through the creation of innovative, high quality products.⁹³³

In particular, venture capital firms can provide the finance and management skills needed to enable HGSMES to become established and grow, thereby filling two key missing links in the innovation chain. A 1997 Coopers and Lybrand study of venture capital backed firms found that, among the companies surveyed, 40 per cent indicated that they could not have existed or survived without the support of venture capital investment and a further 47 per cent said they would have developed more slowly.⁹³⁴ Nations that encourage new business formation can achieve high levels of innovation because new businesses often have products or services that are new or unique, apply new technologies, serve new market segments and bring new skills and resources to an industry.⁹³⁵

⁹³² McKinsey and Company & the Australian Manufacturing Council Secretariat, op. cit., p.12,13,19,49.

⁹³³ Marsden Jacob Associates, *Financing Growth: Policy Options to Improve the Flow of Capital to Australia's Small and Medium Enterprises*, The National Investment Council, Department of Industry, Science and Tourism, Canberra, 1995, p.9,10. Michael E. Porter, op. cit., p.265 reported that a key to competitive advantage in international services competition was access to venture and development equity capital to enable service firms to start-up and then expand.

⁹³⁴ Coopers & Lybrand, *The Economic Impact of Venture Capital*, Department of Industry, Science and Tourism, Canberra, 1997, p.3.

⁹³⁵ Michael E. Porter, op. cit., p.668.

Fund managers can often make a significant contribution to the management of a firm. They often have extensive experience with start-ups, sound management skills and knowledge of the dynamics of the industry. The Coopers and Lybrand study showed that venture capitalists made a major contribution to the management of firms by: acting as a sounding board for ideas (65 per cent); advising on corporate strategy and direction (58 per cent); providing financial advice (48 per cent) and challenging the status quo or providing another opinion (40 per cent).⁹³⁶ In turn, because fund managers have a sound understanding of the firms in which they are investing, their provision of finance is more flexible and focused on the needs of the firms than traditional sources of finance.

Venture capital firms are also important because they help channel a greater percentage of the nation's savings into productive investment. Individual passive investors can be encouraged to invest in venture capital companies - rather than unproductive activities - because in well-functioning markets, they generally provide good returns on investments. Further, because venture capital companies spread risk by investing in a range of companies, they shelter individual passive investors from the inherent risks of investing in individual small businesses.⁹³⁷

Venture capital can foster employment and economic growth. The Coopers and Lybrand study found that, between 1992 and 1996: employment grew 20 per cent annually in venture-backed companies, compared to the average annual employment growth of just 2 per cent among the top 100 Australian companies; and average sales grew by 42 per cent per year, compared to 6 per cent average annual sales growth among the top 100 companies.⁹³⁸

The informal equity market is also important to creating competitive advantage through innovation. 'Business angels' are people who provide equity capital for small businesses, typically between \$50,000 and \$100,000. They fill a major gap in the equity finance market because such amounts are too small for a venture capital fund, given the high costs of administration and risk involved in financing small businesses. There is evidence that the 'business angels sector' has the potential to provide an enormous amount of equity finance to small businesses. United States estimates indicate that business angels provide at least five times as much funding in dollar terms as the venture/development capital funds, and finance at least 20 times more ventures. Some business angels also provide debt finance, importantly on a long-term, patient basis. Many also play a key role in managing the businesses they invest in. Often, business angels have a strong business background and can therefore provide the management skills and business contacts that the small business owner/manager may lack. This close involvement enables the business angel to monitor the investment and ensure its success in a way not feasible for larger equity capital funds.⁹³⁹ Thus, business angels can foster the establishment and growth of innovative SMEs through the provision of finance and management expertise.

⁹³⁶ Coopers & Lybrand, *The Economic Impact of Venture Capital*, op. cit., p.3.

⁹³⁷ Australian Academy of Technological Sciences, op. cit., p.13,39,46.

⁹³⁸ Coopers & Lybrand, *The Economic Impact of Venture Capital*, op. cit., p.3.

⁹³⁹ Marsden Jacob Associates, op. cit., p.24,43,45,46.

Access to debt finance on reasonable terms is also an important determinant of the level of investment, and therefore innovation and growth. The level of interest rates is an important determinant of the rate of investment because investment in productive activity only occurs where returns in excess of that achievable through putting money in financial institutions can be expected.

2. Market Failure and Australia's Weaknesses in the Provision of Finance

The Labor Government soundly summed up the inadequate financial system they were presiding over in the 1994 White Paper on Employment:

...the financing problems of small business have continued to feature prominently in industry submissions to government. This has been reinforced by key reports to government suggesting that access to both debt and equity finance continues to be a constraint on the development of potentially high growth firms, including early stage businesses, those with new technologies, and those seeking to expand into overseas markets.⁹⁴⁰

The following table shows that at the end of the Labor Government's term, manufacturers stated that a number of finance-related indicators continued to impede the commencement of innovation projects.

Barriers to Starting Innovation Projects 1996-97

Barriers	Not applicable	Not important	Important
Insufficient retained earnings	52.7	10.5	36.0
Lack of appropriate sources of finance	55.0	11.6	32.6
Insufficient funds to recruit skilled staff	57.8	11.9	29.5
Excessive economic risk perceived by financiers/investors	71.9	7.7	19.6

Source: Australian Bureau of Statistics, *Innovation in Manufacturing 1996-97*, Cat. no. 8116.0, p.13.

Equity Capital for SMEs

The absence of a significant equity capital market for SMEs is a key weakness in the innovation chain. Ideally, innovative SMEs, which generally require amounts that fall below the minimum capital raising requirements of the Australian Stock Exchange,⁹⁴¹ would gain finance from a vibrant venture capital market. Unfortunately, when Labor came to power, there was no such market. In 1983, the Epsie report on impediments to the development of high technology firms in Australia stated: 'A major obstacle is the absence of appropriate sources of capital to enable these enterprises to establish and develop. There is no venture capital market in Australia.'⁹⁴² At the end of the Labor Government's reign, only a very small venture capital market had emerged, despite the Management and Investment Companies program and financial deregulation. The 1995 *Financing Growth* study

⁹⁴⁰ *Working Nation: Policies and Programs*, op. cit., p.74.

⁹⁴¹ Marsden Jacob Associates, op. cit., p.34-36.

⁹⁴² Australian Academy of Technological Sciences, op. cit., p.1.

stated that less than 350, or only 2-3 per cent, of the high growth SMEs, were receiving funds from Australian venture and development capital funds. The bulk of SME equity financing activity was concentrated in just six funds.⁹⁴³

There are many impediments on the supply side to the development of a vibrant venture/development capital market for SMEs.

Firstly, the high costs incurred in establishing individual funds are a major barrier to the establishment of venture capital firms. Costs in excess of \$1 million can be incurred in the first year in obtaining licences and premises, hiring a management team, raising capital from investors, selecting and managing equity investments and so on.⁹⁴⁴

Secondly, fund managers generally do not invest in SMEs because such investments carry large administration costs relative to the amount of money involved. Fund managers can only manage a limited number of investments. The cost of establishing, monitoring, managing and exiting equity investments in firms is very large and is roughly the same for firms of all sizes. Therefore, to offset high administration costs, venture capitalists seek large investments. The minimum threshold per project typically ranges between \$1 million and \$5 million and very few investments are made at the smaller end of this threshold.⁹⁴⁵ This means that many SMEs cannot get the equity finance they need to maximise their growth. Unpublished research by the Yellow Pages in 1995 found that 97 per cent of small businesses seeking external equity finance to fund their growth need less than \$500,000.⁹⁴⁶

Thirdly, the lack of a significant venture capital market is itself an impediment to its emergence. Investors are reluctant to invest in SMEs because there is no well developed market into which they can sell their investment if the company is performing poorly. Furthermore, an investor's money has to be tied up for long periods before equity investments in SMEs can be profitably realised. Early sale of an equity share is likely to bring very poor returns because the firm is likely to be investing heavily with expected growth still a long way off and uncertain. It generally takes longer than five years for an SME to reach a point at which it might be desirable for an investor to sell their share. The lack of an exit mechanism for SME equity investments constitutes a major risk for investors and is a key reason they are reluctant to invest in SMEs.⁹⁴⁷

Fourthly, the development of a vibrant venture capital market has been impeded by the fact that it is not well established as an asset class. The segment has not been

⁹⁴³ Marsden Jacob Associates, op. cit., p.51,59.

⁹⁴⁴ *ibid.*, p.60.

⁹⁴⁵ *ibid.*, p.31,56. Ernst and Young & the Centre for Innovation and Enterprise, *Investment Readiness Study: A Report Produced by Ernst & Young and the Centre for Innovation and Enterprise for the Department of Industry, Science and Tourism*, Australian Government Publishing Service, Canberra, 1997, p.11 reports investors as claiming the existence of a gap in funds in the \$0.5 million to \$2.5 million dollar range, which falls between the business angels sector and the formal venture and development capital sector.

⁹⁴⁶ Marsden Jacob Associates, op. cit., p.43.

⁹⁴⁷ Arthur Anderson, *Strategic Study on Development Capital*, Arthur Anderson, n.p., 1997, p.13; and Marsden Jacob Associates, op. cit., p.29.

defined in a consistent manner over time, with the profile of the managed equity funds industry shifting from venture capital in the 1980s, toward development capital more recently. Partly as a result, there is little information on the history of returns to venture/development capital firms. Institutional investors will not invest until they have relevant data on which to base their investment decisions, particularly given the abundance of less risky asset classes to invest in, such as bonds, property and shares.⁹⁴⁸

Fifthly, investors also reject the provision of equity finance to many sound firms because very high rates of return on investment are required to offset the risks involved in financing SMEs. Such rates are also higher in Australia because of the added risk associated with an under-developed market, such as the lack of an exit mechanism. Whereas investors might invest in Treasury bonds for an annual return of 8 per cent because of their lack of risk, they generally won't invest in unlisted later stage SMEs unless the expected annual rate of return is 25-30 per cent. For investments in early stage SMEs, expected returns of 40-50 per cent per annum are needed to attract equity investors,⁹⁴⁹ and where high technology is involved, higher rates of expected return are required.

Sixthly, fund managers can afford to be extremely selective in choosing investments because there are few funds operating in Australia and many SMEs seeking finance. More than 95 per cent of proposals put to fund managers are rejected, often after many months of investigation. This limits the amount of finance provided to sound firms.⁹⁵⁰

Seventhly, superannuation firms have been reluctant to make equity investments in SMEs. While legislation mandates that huge amounts of savings flow to superannuation funds, far too little of the money is being directed to productive activities. Only 17 of more than 160 large superannuation funds appear to invest in SMEs, either directly or through venture/development capital funds. Much less than one per cent of superannuation assets are invested in SMEs and very little of this is early stage financing. By contrast, US superannuation funds invest around 3.5 per cent of their funds in SMEs, thereby providing a strong stimulus to the US venture/development capital industry.⁹⁵¹

There are a range of reasons why superannuation funds don't invest in SMEs beyond the significant reasons outlined above. Superannuation firms, because they manage other people's money, are also subject to fiduciary responsibilities, due diligence requirements and prudential supervision. This produces high costs and encourages superannuation firms to favour very large, later stage investments that carry lower risks.⁹⁵² Furthermore, many superannuation fund trustees among the 100,000-plus superannuation funds in Australia have little understanding of their role and therefore tend to be highly conservative in their asset allocation decisions. Many

⁹⁴⁸ Marsden Jacob Associates, op. cit., p.54,57.

⁹⁴⁹ Ernst and Young & the Centre for Innovation and Enterprise, op. cit., p.37.

⁹⁵⁰ Marsden Jacob Associates, op. cit., p.57,59.

⁹⁵¹ *ibid.*, p.26,51,52.

⁹⁵² Marsden Jacob Associates, op. cit., p.24-26; and Arthur Anderson, op. cit., p.11.

have no awareness of equity investments. Some do not appear to understand that the Superannuation Industry (Supervision) Act enables them to adopt a portfolio approach to investment decisions and does not require them to defend each individual investment. Most trustees rely heavily on advice from a handful of asset consulting firms, all of which are highly conservative in their asset allocation advice. Many of these consultants come from an actuarial background and rely heavily on published performance data on alternative assets and fund managers. Because there is no such data for SME based investments, the consultants generally do not even consider investment in SMEs.⁹⁵³

There are also many impediments to the flow of equity finance to SMEs on the demand side.

Firstly, many SMEs have little awareness of equity finance, partly as a result of the lack of an identifiable market for SME investments.⁹⁵⁴

Secondly, many SMEs are reluctant to consider equity finance because it entails some loss of control of their firms, even though many would benefit if they took on equity finance, as well as the management expertise that can accompany it.⁹⁵⁵ This is evidenced by a September 1995 Yellow Pages survey which found that, among small businesses aiming to grow, 71 per cent were seeking debt finance to fund the growth, 12 per cent were seeking equity finance and 5 per cent were seeking a combination of both.⁹⁵⁶

Thirdly, many SMEs struggle to gain access to equity finance because they are not 'investment ready'. *Financing Growth* stated that the great majority of SMEs do not understand the basic steps involved in attracting equity investments, such as being able to provide accounts, a realistic business plan and audited financial statements.⁹⁵⁷ Disturbingly, this lack of investment readiness is often an impediment to gaining finance for Australia's emerging ETM and service exporters.⁹⁵⁸ Compounding this problem is the fact that each equity investor type, such as Pooled Development Funds, Venture and Development Capital Funds, business angels and superannuation firms, has different requirements that need to be met before they will provide equity capital.⁹⁵⁹ In turn, this lack of investment readiness impedes the development of a venture/development capital market because fund managers can not find enough investment ready firms in which they can invest. Given the small sums involved by comparison with available investments in other asset classes, the

⁹⁵³ Marsden Jacob Associates, op. cit., p.53.

⁹⁵⁴ *ibid.*, p.29.

⁹⁵⁵ House of Representatives Standing Committee on Industry, Science and Technology, op. cit., p.193,197; Marsden Jacob Associates, op. cit., p.19; and Ernst and Young & the Centre for Innovation and Enterprise, op. cit., p.32.

⁹⁵⁶ Ernst and Young & the Centre for Innovation and Enterprise, op. cit., p.32.

⁹⁵⁷ Marsden Jacob Associates, op. cit., p.19.

⁹⁵⁸ McKinsey and Company & the Australian Manufacturing Council Secretariat, op. cit., p.50; and LEK Partnership, op. cit., p.74,75.

⁹⁵⁹ Ernst and Young & the Centre for Innovation and Enterprise, op. cit., p.vii.

amount of time and money expended looking for 'quality deal flow' is often not worth the effort for many institutional investors.⁹⁶⁰

Fourthly, SMEs are deterred from seeking equity investments because they face significant search costs⁹⁶¹ given: the lack of an identifiable equity market; the dearth of available finance; high rejection rates; and the significant time and money that must be expended to meet all the criteria necessary to attract an equity investor.

Fifthly, the key advisers of SMEs, namely their accountants, management consultants and lawyers, also tend to have little understanding of equity investment. Most have had little or no exposure to equity finance, but many have considerable knowledge of debt finance options. This reinforces the lack of knowledge among SMEs of equity finance and their preference for debt finance.⁹⁶²

Thus, there are a multitude of impediments to the development of a vibrant equity capital market for SMEs. This lack of finance is preventing many potential firms from starting up and impeding the development and growth of many existing firms, thereby reducing innovation, restructuring, growth and competitiveness.

Most critically, market failure is most acute in the areas most crucial to achieving competitive advantage based on innovation, namely start-up firms, innovative high technology firms and firms seeking to grow rapidly through exports.

With respect to start-up firms, the 1995 *Financing Growth* study reported that Australia's highly under-developed equity capital market had reduced even its minor role in providing venture capital, preferring to focus on firms in development phases. Many fund managers simply exclude small early stage firms from consideration because of their higher risk.⁹⁶³

Market failure is acute in the provision of seed and start-up equity finance to innovative, high technology firms. The 1983 Epsie report on high technology enterprises found:

Equity finance, which is the appropriate funding for the start up and early growth phases, has rarely been available... [T]he lack of a venture capital market...substantially reduces the chances of success for Australian high technology enterprises compared to their counterparts in other countries...⁹⁶⁴

[T]he Australian society has no effective vehicle for marshalling its people's savings towards the equity funding of new industrial enterprises leading to growth and creation of jobs through innovation.⁹⁶⁵

⁹⁶⁰ Arthur Anderson, op. cit., p.12.

⁹⁶¹ Marsden Jacob Associates, op. cit., p.29.

⁹⁶² Ernst and Young & the Centre for Innovation and Enterprise, op. cit., p.33.

⁹⁶³ Marsden Jacob Associates, op. cit., p.31,54,56.

⁹⁶⁴ Australian Academy of Technological Sciences, op. cit., p.10.

⁹⁶⁵ ibid., p.26.

Similarly, the 1990 Beddall Report found: 'Currently, it is easier for [people with] viable inventions to obtain overseas money instead of Australian money which of course means that some promising ideas do not get developed in Australia.'⁹⁶⁶ The report noted a 1987 BIE survey that found that 70 per cent of innovative small businesses in emerging industries stated that their growth had been impeded by lack of access to finance.⁹⁶⁷

Five years later, Senator Cook, in announcing the Innovation Statement, admitted the innovation chain was breaking down due to a lack of equity finance:

As a country, we need to be better at accessing, commercialising and using ideas.

We should congratulate ourselves as a country of ideas.

But far too many good ideas get away.

The biggest sticking point is access to finance.

A number of recent studies have identified a lack of depth in venture and development capital and an immature equity finance market in Australia.⁹⁶⁸

The Labor Government never addressed this market failure. At 1997, with demand for such venture capital far exceeding supply, investors still refused to support the sector.⁹⁶⁹ This failure to intervene to address a clear market failure thereby impeded restructuring to innovative market segments.

Markets fail to provide adequate equity finance for innovative start-up firms for several important reasons in addition to those outlined above. Firstly, such investments are particularly risky, as the results from seed and early stage equity investment in high technology are difficult to predict. Secondly, fund managers often do not understand the nature and potential of the technology, meaning they can not adequately assess the risk of high technology investments and often fear them, despite the potential for significant returns. Under these circumstances, many investors prefer to play safe in the less risky bond, property and share markets.⁹⁷⁰ Thus, a particularly severe market failure exists in the provision of finance to those firms upon which national competitiveness is crucially dependent.

Much research has also confirmed that Australian firms lack access to the venture and long-term debt capital needed to finance export drives.⁹⁷¹ Most concerning is that

⁹⁶⁶ House of Representatives Standing Committee on Industry, Science and Technology, *op. cit.*, p.195.

⁹⁶⁷ *ibid.*, p.194,196.

⁹⁶⁸ Peter Cook, *Putting Ideas to Work for Australia*, *op. cit.*, p.7.

⁹⁶⁹ Arthur Anderson, *op. cit.*, p.7,22.

⁹⁷⁰ Marsden Jacob Associates, *op. cit.*, p.27,28.

⁹⁷¹ Peter Ewer, Winton Higgins & Annette Stevens, *op. cit.*, p.91; and Pappas, Carter, Evans & Koop/Telesis, *op. cit.*, p.162,163. Report of the Committee for Review of Export Market Development Assistance, *op. cit.*, p.40 reported that exporting firms found it difficult to obtain funds from financial institutions, as lenders were often highly cautious in their assessments of risk, preferring to support less risky investments in protected domestic markets. KPMG Peat Marwick, *op. cit.*, p.22 found that 30 per cent of manufacturers cited lack of access to capital as one of the top three impediments to them increasing their international business over the following two years.

the rise of ETM and service exporters is being significantly impeded by a lack of access to finance. A McKinsey survey found that 62 per cent of 'born global stand alone' ETM firms viewed finance as 'a very or critically important constraint' to exporting,⁹⁷² while the LEK Partnership study found that access to finance was the number one concern of more than 50 per cent of Australia's emerging service exporters. More than 50 per cent of the latter had been refused finance in the last three years and 57 per cent of the non-exporters indicated that finance was the major barrier preventing them from establishing exports. Furthermore, the LEK study found that very little equity finance had been provided to service exporters from the local market.⁹⁷³ Financial institutions, in particular, lack the expertise to lend to innovative SME exporters.⁹⁷⁴ Many lack the skills to assess the risk involved in export projects. This leads to excessive conservatism. For example, banks are reluctant to finance the export expansion of SMEs with few assets, even where firms have high cash flow and a successful record of export growth.

'Short-Termism'

The financial system is also excessively focused on short-term profit, rather than facilitating the investment needed for long-term prosperity in innovation-intensive market segments. For example, most investors on the stock market have little understanding of the businesses in which they invest, and therefore buy and sell shares largely on the basis of short-term profit results. Being either impatient or uninformed about a company's problems, investors tend to dump their stock at the first sign of difficulty, rather than focus on how to re-build the competitiveness of firms.⁹⁷⁵ This short-term focus is reinforced by the fact that many chief executive officers have salary packages linked to short-term profits or sales. The focus on short-term profit can lead to an undue focus on mergers and acquisitions, often accompanied by significant debt.⁹⁷⁶ Investment in new products and processes and other underpinnings of competitive advantage are often avoided or delayed because any short-term earnings fall would be punished by investors selling their shares and forcing the stock price downward.⁹⁷⁷ The overall result is slower growth and a less competitive economy.

Banks also tend to have little understanding of, or interest in, the investments needed by firms to become and remain competitive. They generally have little or no stake in the firms to which they lend and rarely engage in long-term strategic relationships with their business clients. The result is that banks simply look at borrower's balance sheets and short-term prospects. If the business has a short period of financial instability, banks simply foreclose. This focuses the attention of businesses on short-

⁹⁷² McKinsey and Company & the Australian Manufacturing Council Secretariat, op. cit., p.49.

⁹⁷³ LEK Partnership, op. cit., p.73-75.

⁹⁷⁴ LEK Partnership, op. cit., p.73; and McKinsey and Company & the Australian Manufacturing Council Secretariat, op. cit., p.51.

⁹⁷⁵ James P. Womack, Daniel T. Jones & Daniel Roos, op. cit., p.197,198.

⁹⁷⁶ Lester Thurow, *Head to Head*, op. cit., p.282-285.

⁹⁷⁷ *ibid.*, p.284; and Michael E. Porter, op. cit., p.660.

term profits, rather than investment in the underpinnings of long-term competitiveness.⁹⁷⁸

Debt Finance

As the Beddall report found: 'A significant obstacle to successful growth and development of small business has been access to finance under favourable terms and conditions.'⁹⁷⁹ That report found that while deregulation had led to growth in banking activity in a number of market segments such as the money, bond and foreign exchange markets, it had not brought an improved performance by banks in making finance available to small business. Banks have been too conservative in lending to small businesses and have put too few resources into understanding small business. For small businesses starting up, accessing finance can be particularly difficult and, even when small businesses are established and have a record of sound management and performance, banks still generally emphasise the need for collateral security.⁹⁸⁰ The Beddall report concluded: 'The market place continues to ignore the needs of small business to borrow sums of up to \$100,000 where a short fall in security exists and despite demonstrated good cash flow projections.'⁹⁸¹ The result of this conservatism was that banks passed up opportunities for sound loans, small business were denied fair access to loans and the growth of the Australian economy was impeded.

The experience of the Labor Governments also suggests that markets do not always produce a level of interest rates consistent with bringing full employment. The fact that Australia's cost of capital was significantly higher than the OECD average in a deregulated financial system, where the market is the greatest determinant of rates, indicates market failure that left Australian enterprises at a considerable competitive disadvantage for the entire period from the 1983 reforms to the end of the Labor Government. Many of the 400 submissions to the Hughes report on exporting noted that the high cost of capital was one of the key disadvantages faced by Australian exporters.⁹⁸² High interest rates mean that much of the investment that would have been economic with the interest rate climate that prevailed in many overseas nations, was not proceeded with in Australia. Growth and restructuring were thereby impeded.⁹⁸³

3. Rationalism and Finance

The Labor Government's desire for meaningful policies in the equity finance area was revealed when the Beddall Committee, having effectively identified a number of major weaknesses in the financial system impeding the flow of finance to SMEs,

⁹⁷⁸ Jane Marceau, ch.12 'Industry policy' in Peter Vintila, John Phillipmore and Peter Newman (eds), *Markets, Morals and Manifestos: Fightback! and the Politics of Economic Rationalism in the 1990s*, Institute for Science and Technology Policy, Murdoch University, Murdoch, Western Australia, 1992, p.143.

⁹⁷⁹ House of Representatives Standing Committee on Industry, Science and Technology, *op. cit.*, p.190.

⁹⁸⁰ *ibid.*, p.190,191,193,198,205,206.

⁹⁸¹ *ibid.*, p.198.

⁹⁸² Report of the Committee for Review of Export Market Development Assistance, *op. cit.*, p.2,21-23.

⁹⁸³ Pappas, Carter, Evans & Koop/Telesis, *op. cit.*, p.92-94.

recommended that the IC undertake a review of the availability of finance to small business.⁹⁸⁴ A cynic would suggest that this was a way of appearing to take action, while establishing a process that would ensure no government action was taken.

The IC report was extreme rationalism at its worst, revealing an organisation with little knowledge of active industry policy, barely able to admit that markets fail and seemingly unable to even contemplate any active government action to improve the functioning of the Australian economy. Many submissions to the IC, and indeed the final report, outlined the numerous weaknesses of the equity capital market.⁹⁸⁵ However, having outlined the weaknesses, the report avoided any serious exploration of possible government solutions. For example, despite numerous government reports and submissions indicating that the lack of equity and development capital for SMEs has been a problem for decades, the IC simply asserted that the market was working effectively, stating that: '...the competitive search for profit would tend to fill any gaps that reflected real profitable opportunities.'⁹⁸⁶ The IC reasoned that the venture capital market was not under-developed because if it was, fund managers would be making above normal profits. Given that fund managers were often making poor profits, the IC reasoned that this proved the market was not under-developed.⁹⁸⁷ This ignores the vast array of structural impediments to the establishment of adequate venture capital markets outlined above. Yet the IC declared any problems were primarily due to the recession and high interest rates, not structural issues.⁹⁸⁸ While the IC reported that SME representatives 'claimed'⁹⁸⁹ there was a lack of equity finance⁹⁹⁰ and themselves acknowledged the market was small, they simply re-asserted that the market was working effectively and gave no serious consideration to how government action could address the clear structural weaknesses in the equity finance market.

The same approach was taken to all key structural problems in the equity finance market. For example, the IC acknowledged that superannuation funds were extremely conservative and were failing to invest to any significant extent in SMEs, noted many of the impediments to super fund investment in SMEs, and then recommended that superannuation funds not be directed to allocate funds to SMEs, without any detailed analysis of the issue. Indeed, the IC recommended that no action be taken to increase funds available to SMEs from any institutional investors, again without any detailed consideration on how government policies could make this work. The IC argued that the lack of institutional investment in SMEs and their general failure to consider any equity investments of less than \$1 million is not a

⁹⁸⁴ House of Representatives Standing Committee on Industry, Science and Technology, *op. cit.*, p.199.

⁹⁸⁵ See Industry Commission, *Availability of Capital: Report No.18*, Australian Government Publishing Service, Canberra, 1991, p.xviii-xxi, as well as ch. 9 'The allocation of equity finance' and ch.10 'Availability of equity finance for smaller enterprises', pp.137-198.

⁹⁸⁶ Industry Commission, *Availability of Capital*, *op. cit.*, p.172.

⁹⁸⁷ *ibid.*, p.184.

⁹⁸⁸ Industry Commission, *Availability of Capital*, *op. cit.*, p.xxiii states: 'The Commission considers that perceived problems about the availability of capital in recent years are attributable in large part to general economic conditions.'

⁹⁸⁹ Industry Commission, *Availability of Capital*, *op. cit.*, p.xix.

⁹⁹⁰ *ibid.*, p.xix.

market failure.⁹⁹¹ The fact that failure to provide venture capital to assist innovative firms to start up and grow may be costing the nation dearly in jobs, restructuring, growth and competitiveness was not seen as relevant.

In another section of the report, the IC noted that many SMEs are not investment ready and that investment in the sector is impeded by the lack of an exit mechanism, but failed to even consider any way of remedying these problems. Instead, the IC simply took these problems as given,⁹⁹² stating: 'What is at issue therefore, is whether smaller enterprises are receiving less outside equity than they should, taking these factors into account.'⁹⁹³ In another section of the report, the IC noted that would be business angels and SMEs needing finance have difficulty locating each other but recommended that the Federal Government play no role in providing or catalysing matching services.⁹⁹⁴

In short, the IC approach was to ignore the plethora of previous reports and submissions outlining the lack of equity capital, the enormous economic opportunities missed due to the lack of equity capital and the numerous solutions proposed to remedy the situation. Markets were simply assumed to work effectively and no serious consideration was given to government proposals to remedy clear market failures occurring in the finance sector.

A market based approach to equity finance has failed dismally in producing the optimal amount of equity finance to SMEs. From the Crawford Report of the 1970s to the Kelty Report on regional development in the early 1990s, this market failure has been recognised and government action proposed to rectify the problem.⁹⁹⁵ Numerous successful examples overseas demonstrate how this crucial weakness in Australia's innovation chain could be remedied.

Unfortunately, Labor's attempts to encourage the emergence of a powerful equity market for SMEs were inadequate, the PDF program notwithstanding. The Labor Government wound down its only ever small focus on Management and Investment Companies, believing that the facilitation of the operation of market forces through financial deregulation would bring optimal results in financing. This market forces strategy hasn't worked and a decades old market failure remains.

The result of a lack of action to establish a venture and development capital market over previous decades has been that tens of thousands of firms with innovative ideas have not been able to commercialise their investments due to a lack of finance, or

⁹⁹¹ *ibid.*, p.xx,xxi,137,138,173-181,188.

⁹⁹² *ibid.*, p.170,171.

⁹⁹³ *ibid.*, p.171.

⁹⁹⁴ *ibid.*, p.xxi,xxv.

⁹⁹⁵ John Crawford, Brian Inglis, R.L.J. Hawke & N.S. Currie, *op. cit.*, p.7.66,7.67 stated: 'Consideration [should] be given to appropriate institutional arrangements for the provision of equity and long-term finance to small and medium-sized firms...' and recommended an expansion of powers and more funds for the Commonwealth Development Bank and the development of a specialised financing institution in the private sector. Taskforce on Regional Development, *Developing Australia: A Regional Perspective: A Report to the Federal Government by the Taskforce on Regional Development*, vol.1, The Taskforce on Regional Development, Canberra, 1993, p.6 states: 'The Taskforce recommends the Government should consider ways of establishing a market for equity capital in small and medium-sized private companies.'

have commercialised their investments offshore, to the benefit of nations overseas. Based on the experience of nations like the US, it is reasonable to suggest that among such a cohort of firms, a significant minority of firms would have failed, many would have grown quickly and been more profitable than average, and a handful may have become large global players. The rationalist inspired failure to act to build up venture capital may have prevented the emergence of a raft of innovative ETM and high value services exporters, thereby reducing economic and employment growth and national competitiveness.

4. Industry Policies to Foster Excellence in Industrial Financing

Labor's reforms to establish a competitive financial market were important. A competitive financial market will often provide adequate amounts of capital at reasonable rates to many businesses.⁹⁹⁶ However, active industry policies must complement competitive market policies, chiefly to catalyse a vibrant venture and development capital market.

In every nation in which there is an identifiable venture capital market, government has been the catalyst for its emergence.⁹⁹⁷ Active policies are necessary due to the impediments to the growth of a venture capital market caused by its own lack of size, as discussed above. Interestingly, however, it has been the experience of a number of countries that once a certain critical mass has been reached, the sector flourished and became self-sustaining. By contrast, market forces alone will not bring the establishment of a vibrant venture capital market. In nations where the Government has failed to take effective action to stimulate the emergence of a venture capital market, they simply do not develop.

To address the market failure in the crucial area of seed, start-up and early expansion phase equity capital for innovative, high technology firms, the Labor Government could have established a program similar to that established in 1997 by the Coalition. The Innovation Investment Fund involves the provision of \$130 million by the Federal Government on a 2:1 basis with private sector capital, thereby facilitating the creation of five investment funds in the range of \$30-50 million each. Expert private sector fund managers were selected to manage each of the funds. Funds are to be directed to small, technology based companies in the seed, start-up and early stage phases. The Innovation Investment Fund is directed to: developing a self-sustaining early stage, technology based venture capital industry; developing experienced fund managers; establishing a self-funding program over the medium-term; and encouraging the development and growth of innovative, new technology companies that are commercialising R&D through the provision of finance and management expertise.⁹⁹⁸ The program is likely to be welfare enhancing because: it is directed to two key links in the innovation chain and will therefore promote innovation, growth and restructuring towards sophisticated products and services; the Government gets its money returned with interest and a small share of any profits on the sale of firms,

⁹⁹⁶ Michael E. Porter, *op. cit.*, p.639.

⁹⁹⁷ Australian Academy of Technological Sciences, *op. cit.*, p.104.

⁹⁹⁸ John Howard, *More Time for Business*, *op. cit.*, p.101,102.

provided the funds are successful; and, where firms that would not have been established without the scheme are assisted to become successful, growth and tax revenue are increased.

The Government should also encourage the venture capital market for SMEs more generally, and foster the development capital market to enable established firms to grow rapidly and launch export drives.

Much can be learned from the United States experience. In 1958, when the United States had no institutional venture capital market, the Federal Government passed the Small Business Investment Act. Under the Act, the US Small Business Administration licences Small Business Investment Companies (SBICs), which are private venture *and development* capital companies that make equity capital and long-term credit available for small independent businesses. In return for pledging to finance small businesses (which in the United States means less than 500 employees), SBICs may qualify for government backed long-term loans.⁹⁹⁹

The program was highly successful, with 649 SBICs being established by 1964. Two reports in the early 1980s showed the program had been welfare enhancing to a significant extent. SBIC funded enterprises had generated 10 times the rate of employment growth than the average for all small businesses.¹⁰⁰⁰ By 1994, SBICs had invested around \$12 billion in nearly 100,000 small businesses. A group of firms that today are large, global firms, such as Apple, Federal Express and Intel, were established through the SBIC program. A 1992 report by the US Small Business Administration showed that more than US\$500 million in direct taxes had been paid by SBICs and it is understood that taxes paid by portfolio companies are in the tens of billions of dollars.¹⁰⁰¹ Further, a 1992 reform of the SBIC program, which allows fund managers to invest government guaranteed funds in conjunction with their own through 'participating securities', has increased the rate of private capital raising by SBICs by more than ten times the previous rate, with new capital raising now running at \$1 billion per annum.¹⁰⁰² This has brought a great expansion in the number of SBICs and the amount of money raised, even though the US Federal Government gets a return of its money with interest and a percentage of the profits, where a combination of private and public money is invested using Participating Securities.¹⁰⁰³

In addition, the success of the SBIC Program provided the stimulus for a now large, exclusively private, venture capital sector by: creating a well-functioning market; demonstrating the profitable opportunities available; and providing the training ground for many private venture capitalists. Most private venture capital investments are in high technology areas because of their potentially massive

⁹⁹⁹ William Dunbar, 'Today's SBIC: New design, renewed commitment', *Venture Capital Journal*, May 1995, p.6.

¹⁰⁰⁰ Australian Academy of Technological Sciences, op. cit., p.105,106.

¹⁰⁰¹ William Dunbar, op. cit., p.6.

¹⁰⁰² *ibid.*, p.6.

¹⁰⁰³ Small Business Investment Corporations at <http://www.envista.com/nasbic/SBICs.html>, p.2.

returns,¹⁰⁰⁴ meaning the private venture capital sector is playing a key role in achieving growth, innovation and restructuring to sophisticated product segments.

The Government should draw on the US experience to establish a comprehensive venture and development capital market in Australia, most particularly through participating securities. An 'IIF/SBIC approach' could involve the Government investing along with private funds on a dollar for dollar basis, with government funds returned with interest, but fund managers gaining a disproportionate share of profits to encourage their participation. In return, fund managers would invest only in SMEs and agree to invest a minimum percentage of funds in SMEs at the venture stage, with remaining funds devoted to development capital to assist firms in their growth phases.

If necessary, such initiatives could be complimented by tax concessions. Labor's Pooled Development Funds (PDF) program was somewhat successful, particularly after a 1994 review of the program led to a reduction in the concessional rate of tax for PDFs from 25 to 15 per cent for income derived from investments in SMEs.¹⁰⁰⁵ By March 1997, 48 PDFs were registered with the PDF Board and over \$150 million in capital had been raised,¹⁰⁰⁶ although the program failed to substantially address the market failure in equity finance for amounts below \$2 million.¹⁰⁰⁷ Thus, tax concessions can encourage investment in venture capital. It may be that such favourable tax treatment could usefully be provided under an Australian version of the SBIC program, at least until a vibrant venture and development capital market has emerged.

Having private venture capitalists make all investment decisions would be crucial. As Porter found, direct provision of venture capital by government is generally ineffective because of the inability of bureaucrats to consistently select good projects. By contrast, private venture capitalists, because their own money is on the line, have a stronger motive for avoiding unsound ventures and capitalising on promising ventures.¹⁰⁰⁸

The Government could also seek to get institutional investors to participate in the venture and development capital market. In particular, the Government could capitalise on the concentration of both money, and the power to decide how funds will be allocated between various asset classes, in the superannuation industry. More than half of Australia's superannuation assets are controlled by around 160 funds, each with assets in excess of \$100 million. The investment allocation decisions of much of the superannuation industry are largely made by around 30 individuals in

¹⁰⁰⁴ Australian Academy of Technological Sciences, op. cit., p.106,108.

¹⁰⁰⁵ *Working Nation: Policies and Programs*, op. cit., p.75.

¹⁰⁰⁶ John Howard, *More Time for Business: Statement by the Prime Minister, the Hon John Howard MP*, Australian Government Publishing Service, Canberra, 1997, p.110.

¹⁰⁰⁷ Arthur Anderson, op. cit., p.8.

¹⁰⁰⁸ Michael E. Porter, op. cit., p.668,669. This view is also advanced in Australian Academy of Technological Sciences, op. cit., p.48.

five major asset consulting firms. There is also only a small number of venture/development capital managers.¹⁰⁰⁹

This concentration of money and power creates tremendous scope for the Federal Government to reform the industry. A mixture of co-operation, education and facilitation could ensure that these key decision-makers provide sufficient equity finance to meet both the venture and development finance needs of HGSMEs and also build up mature venture and development capital markets, either by establishing their own fund managing firms or by investing in others. Large superannuation funds are particularly well suited to provision of equity finance because of their risk profile and cash reserves. Merely one per cent of the reserves of the top ten institutions has been suggested as sufficient to establish a substantial venture capital market.¹⁰¹⁰ Therefore, the larger superannuation firms could make a major contribution to establishing a large venture and development capital market, without putting at risk the retirement savings of workers.

The Government could provide two key inducements to encourage the superannuation industry's participation in venture and development capital activity. Firstly, they could participate in the SBIC-type program. Secondly, given the importance of building up national savings, legislation increasing the percentage of wages to be paid in to superannuation fund to a much higher level could be traded for a commitment by superannuation firms to provide significant amounts of venture and development capital to SMEs.

In seeking to encourage the supply of equity capital, government must do more than simply provide financial incentives and direction. Because the sector is gravely under-developed, the skills necessary to underwriting vibrant venture and development capital markets are not widely available. Government will need to work to address the microeconomic constraints to the supply of finance.

Training venture and development capital fund managers is a key priority, given they are generally inexperienced and perform well below world class standards. Government could also provide funds for training, directed to ensuring that Australian bankers, accountants and superannuation fund managers have the necessary skills to assess the risk involved in financing exports, as well as venture and development projects, particularly in high technology areas. Such education could explain the benefits of such investments. Providing this knowledge could mean that sound ventures would no longer be rejected through an irrational fear born out of ignorance, but would be sensibly funded to the benefit of the banks, the exporter and the Australian economy.¹⁰¹¹ In the superannuation sector, the Government could establish training for the key asset consultants and trustees in allocating equity funds to SMEs.¹⁰¹²

¹⁰⁰⁹ Marsden Jacob Associates, *op. cit.*, p.26,53.

¹⁰¹⁰ Pappas, Carter, Evans & Koop/Telesis, *op. cit.*, p.163.

¹⁰¹¹ McKinsey and Company & the Australian Manufacturing Council Secretariat, *op. cit.*, p.51.

¹⁰¹² Marsden Jacob Associates, *op. cit.*, p.53,54 recommends intermediate courses for superannuation trustees.

In addition, the various asset classes within the venture and development capital market segments must be established, together with consistent performance measurement principles and regular reporting by venture/development capital funds. Money will only be invested in equity funds when investors can measure past performance.¹⁰¹³

Governments must address demand impediments to the flow of equity finance. Failure to address such impediments is a key reason why government incentives to encourage the supply of equity finance have sometimes failed.¹⁰¹⁴

A particular impediment to the provision of equity finance to SMEs is the fact that many firms are not investment ready. In high technology HGSMs, the people who achieved the technological advance often become management by default. Many have few management skills and little or no management experience. Investors will not provide equity finance in such circumstances.¹⁰¹⁵

In addition to the proposals outlined in chapter 11 to improve Australian management, the Government could establish an enterprise improvement program based on the Victorian Government's Investment Ready program, which assists innovative, R&D intensive, export oriented HGSMs to obtain equity finance through: a free information seminar on equity investment; an investment ready review or workshop delivered by registered consultants; a further consultancy directed to addressing aspects of the company that need to be improved; and a final consultancy in which an investment prospectus and presentation are developed. The program thus improves the management of SMEs, assists them to become investment ready and helps to provide quality deal flow for investors. Government assistance is provided in the form of a subsidy for the cost of the consultancy services provided.¹⁰¹⁶ A Federal Government program could also draw on Arthur Anderson's 'development funnel' concept.¹⁰¹⁷

More generally, there is a need to educate the SME sector about: the fact that equity finance is an option; the benefits of equity investment and its importance to developing innovative HGSMs; the types of equity investors and which types suits their particular needs; the investors perspective of investing in an SME; and how the Australian SME cultural attitude towards ownership and control can impede business growth and success.¹⁰¹⁸

To complement the build-up of the formal equity capital market, the Government should act to build up Australia's informal equity market. There is currently a large under-utilised pool of business angels who could provide much needed management and equity finance to SMEs. Overseas surveys show that business angels would

¹⁰¹³ Marsden Jacob Associates, *op. cit.*, p.55,60.

¹⁰¹⁴ Ernst and Young & the Centre for Innovation and Enterprise, *op. cit.*, p.2.

¹⁰¹⁵ Arthur Anderson, *op. cit.*, p.16,26.

¹⁰¹⁶ State Government of Victoria, *What is Investment Ready? How to Finance Company Growth*, Business Victoria, Melbourne, 1997, p.2-7.

¹⁰¹⁷ See Arthur Anderson, *op. cit.*, p.14,15,22,28,29.

¹⁰¹⁸ Ernst and Young & the Centre for Innovation and Enterprise, *op. cit.*, p.89.

invest much more if they could find suitable investments and that there is a vast untapped pool of prospective experienced business angels. In Australia, a sizeable pool of experienced ex-managers exists, and many middle-managers in larger corporations would like to manage a smaller enterprise. While many SMEs could not pay salaries commensurate with the skills often possessed by business angels, this can be offset by the promise of significant returns made on equity invested.¹⁰¹⁹

To capitalise on the potential of business angels to inject vast amounts of equity finance and management expertise into small businesses, the Government should undertake a comprehensive policy development process on how to foster the sector. Lower capital gains tax or tax concessions might encourage the injection of management expertise and equity finance into small businesses. The Coalition Government encouraged the growth of the sector by establishing the Business Equity Information Service, which provided funding to investor matching or brokering services that match SMEs and potential investors through database matching services, bulletins, meeting in person and investor forums. A range of such services have been established and are successfully matching SMEs with people able to provide equity finance and management skills.¹⁰²⁰ Some also train SMEs to become investment ready and train investors in evaluating SME proposals. The potential for using accountants to provide introduction and matching services could also be explored.¹⁰²¹

The Government could also consider measures to encourage investors and financial institutions to abandon their short-term profit fixation and instead focus on solid investment by firms directed to achieving long-term competitive advantage. Porter's study found that in nations such as Japan, Germany and Switzerland, where regulations allow financial institutions to hold corporate equity, major lenders hold significant equity stakes and play an important role in corporate governance, including through representation on company boards. Because financial institutions in such companies hold both debt and equity, they are motivated to be concerned with long-term company health through significant strategic investment, rather than focusing on short-term profits and debt coverage. Most shares are held for long periods and are rarely traded, and short-term fluctuations in stock prices are not seen as important. As financiers understand the firms in which they hold equity: the firms are freed from the constraints of the stock-market, with its focus on short-term profit, and can make the investments necessary to sustaining competitiveness over the longer term;¹⁰²² and financiers provide assistance with finance and management where firms suffer recoverable declines in performance.¹⁰²³ As Porter concludes: 'This benefits long-term productivity growth and hence the nation's standard of living.'¹⁰²⁴

Thurow has argued that US financial institutions should be encouraged to take controlling stakes in firms and drive corporate strategy so that the relationship

¹⁰¹⁹ Marsden Jacob Associates, *op. cit.*, p.43.

¹⁰²⁰ John Howard, *More Time for Business*, *op. cit.*, p.108,109.

¹⁰²¹ Marsden Jacob Associates, *op. cit.*, p.47.

¹⁰²² Michael E. Porter, *op. cit.*, p.110-112,661.

¹⁰²³ Lester Thurow, *Head to Head*, *op. cit.*, p.34,35.

¹⁰²⁴ Michael E. Porter, *op. cit.*, p.661.

between firms is transformed from an arms-length relationship focused on short-term profit to a co-operative relationship focused on building competitive corporations through strategic investment. Thurow and others believe that the power of the business-financial groups, such as that found in Japan's keiretsu structure, may be what is needed to build strong international firms in today's highly competitive global economy.¹⁰²⁵

These arguments hold much force but Australia's financial system is vastly different to those in nations such as Japan. Banks have traditionally been legally prevented from making widespread investments in SMEs. Labor, in the 1994 Innovation Statement, allowed banks to make a small amount of equity funds available for their SME clients.¹⁰²⁶ At present, banks can make equity investments in businesses up to an aggregate amount equal to five per cent of their core capital, without prior consultation with the Reserve Bank of Australia. Further, since July 1996, equity investments by financial institutions have been taxed under the capital gains tax provisions, rather than the income tax provisions.¹⁰²⁷ These reforms have encouraged greater equity investments by banks in SMEs, although only to a relatively limited extent. The Government could therefore consider further liberalisation and other encouragement to expand the role of banks in providing SME finance. However, the pace of reform should perhaps be gradual because, at present, Australian banks have little experience in making equity investments in SMEs. The most appropriate approach may therefore be gradual deregulation, commensurate with the banking sector's improved knowledge and capability in making equity investments in SMEs.

To further reduce the incentives for short-termism, quarterly profit statements should be replaced with annual profit statements, a reform already implemented successfully in Japan. This will enable managers to make significant investments in one quarter, with the aim of longer term profits without any fear of being penalised by falling stock prices.¹⁰²⁸

The Government could also consider catalytic action to facilitate the re-establishment of the second boards of the Australian Stock Exchange. The second boards, established in 1984, brought increased access to risk capital for young SME companies that could not afford to list on the main boards by providing a mechanism for investors to exit and realise their investment.¹⁰²⁹ Unfortunately, the second boards ceased in 1992.¹⁰³⁰

¹⁰²⁵ Lester Thurow, *Head to Head*, op. cit., p.286-288,290. For analysis of the finance benefits of the Japanese keiretsu structure, see Michael Gerlach, ch.4 'Keiretsu organisation in the Japanese economy: Analysis and trade implications' in Chalmers Johnson, Laura D'Andrea Tyson & John Zysman (eds), op. cit., pp.141-176; James P. Womack, Daniel T. Jones & Daniel Roos, op. cit., p.194,195,198; Pappas, Carter, Evans & Koop/Telesis, op. cit., p.90; and Lester Thurow, *Head to Head*, op. cit., p.34,35.

¹⁰²⁶ Peter Cook, *Putting Ideas to Work for Australia*, op. cit., p.8.

¹⁰²⁷ John Howard, *More Time for Business*, op. cit., p.108.

¹⁰²⁸ Lester Thurow, *Head to Head*, op. cit., p.289,290.

¹⁰²⁹ House of Representatives Standing Committee on Industry, Science and Technology, op. cit., p.191.

¹⁰³⁰ Marsden Jacob Associates, op. cit., p.37.

However, second boards have been successful in the United States and Japan and a pan-European board has been introduced.¹⁰³¹ A 1997 Catalyst Institute study completed comprehensive research on the experience of alternative equity markets in the United States, Europe and Asia and concluded that a growth equity market (GEM), in the form of a formalised Australian stock exchange, would be beneficial. The report found that such a stock exchange would be useful for medium sized companies with a turnover of at least \$30-40 million. Such a GEM, by providing a visible market for trading of shares and by providing investors with a mechanism to exit and realise their investment, would encourage the flow of capital to medium sized growth firms, thereby facilitating their expansion to larger domestic and global players.¹⁰³² The Government should consider ways of catalysing the establishment of such a GEM.

Finally, with respect to debt finance, it is true that during the period of the Labor Government, too many sound small businesses were denied access to debt finance. However, with increasing competition in the home mortgage market, itself partly a result of the Labor Government opening up competition in the banking sector, banks are beginning to focus more on loans to small business. In particular, some banks are now offering loans without primary emphasis on security, instead focusing on matters such as sound business plans or demonstrated skills and performance. While catalytic action appeared appropriate during the time of the Hawke Governments, it may be that banks operating in a competitive market will be able to serve small businesses effectively in the debt finance area.

To reduce the cost of debt finance, Government should seek to establish a low, stable rate of inflation through: rigorous microeconomic policy, including further tariff and infrastructure reform; prudent macroeconomic policy; and the establishment of a national savings strategy.

¹⁰³¹ *ibid.*, p.37.

¹⁰³² Catalyst Institute, *Study of a Growth Equity Market for Australia*, Department of Industry, Science and Tourism, Canberra, 1997, p.vii,viii,31-33.

Chapter 14: Export Marketing

1. The Importance of Export Marketing to Competitive Advantage Based on Innovation

Firms, particularly those in innovative market segments, need to export because: exports help to achieve the sales volume necessary to absorb the investments in R&D, management and other key capabilities needed to remain competitive;¹⁰³³ competing on global markets against world best firms encourages firms to constantly upgrade their sources of competitive advantage;¹⁰³⁴ huge global markets provide the opportunity for massive sales; world trade is growing significantly faster than world economic growth;¹⁰³⁵ and exporting itself provides the knowledge and experience required for successful on-going exporting.

Exports help to foster national competitive advantage because: exporting is crucial to building a significant national capability in each link in the innovation chain; globalisation has made the tradeable sector of the economy a greater determinant of national prosperity; exports allow solid growth without running into unsustainably large current account deficits; quality exports provide reputation enhancement for other Australian exports;¹⁰³⁶ the act of exporting helps to change Australia's business culture towards an outward looking, global orientation,¹⁰³⁷ and a high exports to GDP ratio appears to encourage economic and employment growth.

To achieve the export sales necessary for survival and prosperity in innovative product segments, firms must master marketing. As the BIE study on the R&D tax concession noted '...the successful introduction of new products and processes to the market depends importantly on firms' capabilities in marketing and distribution.'¹⁰³⁸ The LEK study of Australia's leading service exporters found that the firms considered marketing the second highest source of competitive advantage. It was also the area of greatest difference between the 'high achievers', 52 per cent of which rated marketing as a main form of competitive advantage, and the 'less successful' group, of which only 22 per cent felt similarly. Successful export firms had long-term, integrated marketing and production strategies, while the less successful group

¹⁰³³ Australian Academy of Technological Sciences, op. cit., p.39; Ian Lowe, op. cit., p.2,3; Ross Garnaut, *Australia and the Northeast Asian Ascendancy: Report to the Prime Minister and the Minister for Foreign Affairs and Trade*, Australian Government Publishing Service, Canberra, 1989, p.208; and Report of the Committee for Review of Export Market Development Assistance, op. cit., p.5.

¹⁰³⁴ Industry Commission, *Research and Development*, op. cit., p.154. Austrade, *Helping to Meet the Export Challenge*, Austrade, Sydney, 1994, p.xvi notes that exporting has a significant positive impact on a firm's business practices, such as implementing components of best practice, and also improves the firm's competitiveness in the domestic market. Report for the Committee of Review of Export Market Development Assistance, op. cit., p.31 concluded that when firms began to export, it was often associated with increase productivity, lower costs and improved design, R&D management, quality, production engineering and marketing.

¹⁰³⁵ World Trade Organisation, *International Trade: Trends and Statistics 1995*, World Trade Organisation, Geneva, 1995, p.15,17,19,20.

¹⁰³⁶ Report of the Committee for Review of Export Market Development Assistance, op. cit., p.40.

¹⁰³⁷ Report of the Committee for Review of Export Market Development Assistance, op. cit., p.41,42 notes that export assistance can be an important signal and can encourage the development of an export culture. At p.xxix, recommendation one is: 'The inculcation of an export culture in the Australian community...'

¹⁰³⁸ Bureau of Industry Economics *R&D, Innovation and Competitiveness*, op. cit., p.190.

tended to focus on the short-term and be reactive and opportunistic.¹⁰³⁹ The costs of marketing and distributing many products exceeds the combined costs of developing and manufacturing them. It is thus a crucial source of competitive advantage, particularly in innovative products.¹⁰⁴⁰

Export marketing must be a key focus of national economic policy making because it is extremely complex and risky, requires enormous commitment and investment, and is difficult to perform effectively. These impediments discourage most firms from exporting, while those that undertake it, often struggle to succeed.

The following paragraphs discuss the components of export marketing. The section achieves two key aims. Firstly, it demonstrates the importance of the export marketing process to achieving exports, and therefore to creating competitive advantage through innovation. Secondly, the section shows that export marketing is highly complex, costly and risky, which helps to explain why relying on the market alone will fail to produce a level of exports consistent with maximum economic growth.

Before firms can commit to strategic exporting, they should complete a comprehensive company review, assessing whether they have the skills, resources, commitment and information to support sustained exporting. In general, such a review will reveal that the firm must build up more capacity for exporting in a range of areas.¹⁰⁴¹

Once firms are ready to export, they can usefully: conduct research to select potential markets; examine the potential markets to assess the opportunities and risks in serving them; and select those markets in which there are significant opportunities and in which the firm is likely to have a significant competitive advantage.¹⁰⁴²

Successful firms ensure their product is directed to meeting the needs of particular customers better than any competitors in the target export markets. In seeking to enter a product market, they undertake market research to: determine customer needs; and analyse the activities of competitors, including their number and size, market share, product range and market strategy. With a comprehensive understanding of competitors, firms can then select the group of customers at which their products will be directed and plan a product range that will satisfy their particular customer group more effectively than any competitors. For many Australian exporters, this will involve the production of innovative, quality products aimed at niche market segments.¹⁰⁴³ Every facet of a product, including its features, styling, quality, brand name and packaging, must be designed with the customer

¹⁰³⁹ LEK Partnership, op. cit., p.47,48.

¹⁰⁴⁰ John M. Legge, *The Competitive Edge*, op. cit., p.x.

¹⁰⁴¹ Barraclough and Co. & BSA Management, *Winning Exports*, Pitman Publishing, South Melbourne, Victoria, 1996, p.6,13.

¹⁰⁴² Lee D. Dahringer & Hans Muhlbacher, op. cit., p.57,58. This process is discussed in Barraclough and Co. & BSA Management, op. cit., p.16-21.

¹⁰⁴³ Barraclough and Co. & BSA Management, op. cit., p.36,37; and Philip Kotler, Peter Chandler, Rosalie Gibbs & Rodney McColl, *Marketing in Australia*, 2nd edn, Prentice Hall, Sydney, 1989, p.55,299,300,348.

target market in mind.¹⁰⁴⁴ Market research can show whether a product is likely to sell amongst the intended market and what modifications are necessary for the product to sell.¹⁰⁴⁵ In many cases, firms will need to adjust their existing product range to meet the needs of foreign customers.¹⁰⁴⁶ Market research and analysis needs to be on-going so that changes in the pattern of demand and customer needs are fed back into the R&D and production process.¹⁰⁴⁷ For export marketing to be successful, each part of the organisation must work together towards the overall marketing strategy.¹⁰⁴⁸ In particular, product managers must create a consensus among sales, production and development staff, so as to guide the firm's product development according to marketing principles.¹⁰⁴⁹

Determining the price to charge for a product is a further key determinant of the success of innovative products. To determine likely demand at various price levels, firms need to undertake considerable market research. Given that most Australian exporters compete primarily on innovation and quality, rather than price, firms will generally set prices according to what customers perceive the value of the products to be, rather than on a cost-plus basis.¹⁰⁵⁰ Prices need to be high enough to recoup the significant investment required to produce and market innovative products and to provide reserves for future investment. Many small innovative businesses have failed because they set their prices too low, meaning they did not generate adequate cash flow to fund future investments.¹⁰⁵¹ On the other hand, prices need to be low enough to ensure significant demand for the product.

Distribution is also crucial to the success of innovative products. Firms must pay special attention to physical distribution, given the great distances between the firm and the export market. Good suppliers can lock customers in by satisfying customer needs, providing advice, understanding their products and providing after sales service.¹⁰⁵² Choice of retailer is crucial because purchasers generally pick a supplier first and then pick a product from that supplier's range. Customers also consistently buy from the same supplier and often stick with the same brands. Only a minority of customers - in the range of 10-15 per cent - make a concerted evaluation of alternative brands and suppliers. This is because of the cost and time required to investigate alternatives, knowledge that a particular brand can guarantee satisfaction, and fears about the performance of unknown products. Thus, if a firm's product is widely available at suitable retailers, there is a good chance it will be considered by customers. By contrast, a poor choice of retailers can mean the product will be

¹⁰⁴⁴ The importance of tailoring the various components of a product - such as quality, features, style, size, brand name, packaging and labelling - to the needs of customers in export markets is discussed in detail in Barraclough and Co. & BSA Management, op. cit., p.60-63.

¹⁰⁴⁵ John M. Legge, *The Competitive Edge*, op. cit., p.244.

¹⁰⁴⁶ Barraclough and Co. & BSA Management, op. cit., p.61.

¹⁰⁴⁷ Peter Ewer, Winton Higgins & Annette Stevens, op. cit., p.60.

¹⁰⁴⁸ Philip Kotler, Peter Chandler, Rosalie Gibbs & Rodney McColl, op. cit., p.87.

¹⁰⁴⁹ John M. Legge, *The Competitive Edge*, op. cit., p.211.

¹⁰⁵⁰ Barraclough and Co. & BSA Management, op. cit., p.72,73.

¹⁰⁵¹ John M. Legge, *The Competitive Edge*, op. cit., p.101.

¹⁰⁵² Lee D. Dahringer & Hans Muhlbacher, op. cit., p.462.

automatically missed by most customers, who may then form loyalty to other brands.¹⁰⁵³

Given the importance of distribution, it is not surprising that establishing representation in overseas markets, rather than simply exporting directly to overseas customers, has been shown to be pivotal to achieving strong export growth.¹⁰⁵⁴ Given the small size of most Australian firms, many achieve this by using a distributor or representative agent when first breaking into export markets, rather than employing more elaborate options, such as establishing their own marketing operations in the export market. Such partners located in target countries can often market the firm's products more cheaply and effectively, given their local market knowledge, contacts, and possibly, existing infrastructure.¹⁰⁵⁵

The choice of distributors is crucial. Many firms have one or more experiences with poor distributors before they find a good one. Unfortunately, choosing the wrong distributor can ruin an export drive, spoil a company's reputation in other markets and lead to major losses.¹⁰⁵⁶ Ideally, firms will find distributors with: a sound financial position; knowledge of the market; understanding of the firm's products; facilities and offices accessible to customers; appropriate warehousing and servicing facilities; appropriate geographical coverage to target the firm's intended customers; sound sales staff; and sound promotion skills and capacity.¹⁰⁵⁷

First Steps to Export Success tested the importance of a range of variables in distinguishing high exporting firms and low exporting firms, based on data gathered from 434 export projects. It found that developing close, long-term relationships with local agents and distributors, rather than engaging distributors impersonally from a distance, was one of only two of many variables tested, shown to distinguish high and low export performing firms over the first five years of an export project. High performing exporters had frequent contact with local distributors, sought to develop a long-term partnership and co-operated on key aspects of marketing strategy. Joint planning helps to build co-operation and enables firms to benefit from the local knowledge and experience of the distributor.¹⁰⁵⁸

Innovative products must also be effectively promoted if export drives are to succeed. Promotion is even more important in export markets than in domestic markets because most Australian products are little recognised offshore. Promotional strategy should be worked out and implemented jointly with distributors, in order to

¹⁰⁵³ John M. Legge, *The Competitive Edge*, op. cit., p.223,225-227,246.

¹⁰⁵⁴ Austrade, *Helping to Meet the Export Challenge*, op. cit., p.14 reports that firms with overseas representation achieve significantly higher export sales than firms without it, and the advantage increases over time. By the eighth year in the EMDGS, average exports by firms with overseas representation were around \$3.4 million compared with average exports of around \$1.7 million among firms without it.

¹⁰⁵⁵ *ibid.*, p.24.

¹⁰⁵⁶ *ibid.*, p.52.

¹⁰⁵⁷ *ibid.*, p.52-54.

¹⁰⁵⁸ Chris Styles & Tim Ambler, *First Steps to Export Success: A Project by the PAN'AGRA Research Programme of London Business School with the Support of British Overseas Trade Board, Australian Trade Commission, British Overseas Trade Board Secretariat, London & Australian Trade Commission, Sydney, 1997*, p.1,2,9,15. Barraclough and Co. & BSA Management, op. cit., p.56-58 also stressed the importance of developing close relationships with distributors.

make full use of the distributor's local knowledge and to develop the relationship.¹⁰⁵⁹ Methods including advertising, sponsorships, sales promotion, publicity, personal selling and direct mail should be used to ensure target customers are aware of the products existence, are attracted to purchasing it, and know where to buy it.¹⁰⁶⁰ Promotional campaigns must be sustained over a significant period of time if they are to convince a substantial number of people to try a new, unknown product and eventually build a loyal cohort of buyers.¹⁰⁶¹

Promotion is particularly critical to competing on the basis of innovation because it can highlight the unique features, quality or performance of new products. Even where competitor's products have similar features, a firm can create the impression of being more innovative and concerned to meet customer requirements if they are first to promote the product's features.¹⁰⁶²

To maximise the chances of an export drive succeeding, firms must visit their intended export markets to identify customer needs, analyse competitors, develop pricing policy, engage distributors and formulate promotional strategies.¹⁰⁶³ *First Steps to Export Success* found that breaking into export markets is best facilitated by firm's gathering 'experiential' information via well-prepared market visits, rather than simply relying on general published information and exporting from Australia. Visiting export markets was one of only two of the many variable tested, shown to distinguish high and low exporting firms in the first five years of an export project. The survey showed that discussions with distributors, general visits to the market and personal visits to retailers and wholesalers were regarded as 'highly valuable' by 80 per cent, 81 per cent and 70 per cent of firms respectively. In contrast, general published information was viewed as 'highly valuable' by only 8 per cent of firms, while commissioned market research was viewed as 'highly valuable' by only 20 per cent of firms. Most firms found these information sources 'somewhat valuable'.¹⁰⁶⁴

On this basis, *First Steps to Export Success* recommended a three step process when entering export markets. Firstly, firms should undertake extensive pre-visit preparation, utilising published sources, target country embassies and Austrade services to gather information on the nation and its industry. Secondly, firms should visit target markets to experience the culture and gather information through discussions with distributors, wholesalers, retailers and consumers. Thirdly, on the basis of information gathered, market research can be commissioned to help inform the export drive.¹⁰⁶⁵

Once this market research completed, firms need to undertake comprehensive budgeting and gain access to finance. Gaining finance from commercial sources is the most difficult component of exporting for many firms, as banks require extensive

¹⁰⁵⁹ Barraclough and Co. & BSA Management, op. cit., p.75.

¹⁰⁶⁰ Philip Kotler, Peter Chandler, Rosalie Gibbs & Rodney McColl, op. cit., p.563.

¹⁰⁶¹ John M. Legge, *The Competitive Edge*, op. cit., p.157,159-161.

¹⁰⁶² *ibid.*, p.175.

¹⁰⁶³ Barraclough and Co. & BSA Management, op. cit., p.44,45.

¹⁰⁶⁴ Chris Styles & Tim Ambler, op. cit., p.1,3,7.

¹⁰⁶⁵ *ibid.*, p.13.

evidence of the firm's capacity to succeed in their export venture. Finally, firms need to protect themselves against a number of risks by: taking out insurance to cover transit risks; arranging contracts that protect against exchange rate risks; and insuring against commercial and political credit risks.¹⁰⁶⁶

Once well established in an export market, firms need to consider their next steps for export expansion. The least risky option is to entrench the firm's position in existing markets by greater investment in marketing and distribution networks. Particularly where firms are exporting innovative products, being closer to the market can assist in ensuring products are developed to meet changing customer needs. Exporting through distributors or representative agents can provide insufficient control over the marketing process. For example, a firm's products may be only some of those supplied by the distributor, and the distributor may have less knowledge of, and commitment to, the firm's products.¹⁰⁶⁷

For these reasons, established firms with innovative products may wish to take a greater role in marketing and distribution in the export market themselves. They might establish a joint marketing venture, which can allow a firm to benefit from the local knowledge of their partner's firm, as well as their production, marketing and distribution facilities and staff. Alternatively, a firm could open a branch office, to establish Australian representation in the export market, establish control over management and marketing, ensure the company's interests are advanced and gain more accurate market feedback. Finally, a firm might make a greenfields investment in the foreign market thereby facilitating: total control over marketing, management and production; the tailoring of the firm's infrastructure to the precise needs of the foreign market; creation of products focused on the precise needs of target consumers in the export market; and a long-term presence in the market. Care needs to be taken before firms choose these more significant options because they require significant investments.¹⁰⁶⁸ However, for firms to become large, global players in innovative product areas, they may need to work towards establishing their own international marketing and distribution networks.

Thus, marketing is very complex and difficult for firms to master, yet a crucial determinant of the survival and prosperity of innovative firms. Importantly, there is still a significant window of opportunity in the marketing part of the innovation chain. As major parts of the global economy operate without adequate consideration of marketing, Australia can assist in gaining a competitive advantage in innovative products by establishing expertise in marketing.¹⁰⁶⁹

2. Market Failure and Australia's Weaknesses in Export Marketing

Relying on the market alone will fail to bring the necessary quantity of exports to maximise growth and competitiveness. For general, non-firm specific information on foreign markets and product markets within them, market failure occurs because

¹⁰⁶⁶ Barraclough and Co. & BSA Management, op. cit., p.80-86.

¹⁰⁶⁷ *ibid.*, p.27,28,95.

¹⁰⁶⁸ *ibid.*, p.32,34,35.

¹⁰⁶⁹ John M. Legge, *The Competitive Edge*, op. cit., p.185.

gathering such information is not economic for individual firms, yet government provision of such information can help to make exporting economic for thousands of firms throughout the economy.

Market failure also occurs where individual firms, particularly SMEs, decide against exporting, due to the risk, difficulty, cost and complexity of the task. Breaking into export markets generally takes several years and requires significant investment in new capacity, often involving the production of new or refined products, and a major expansion of marketing activity. For innovative SMEs, the cost of gaining the detailed market information needed to break into export markets is very high relative to sales.¹⁰⁷⁰ The investment required often means firms have to either take on equity investment, or borrow at high interest rates, due to the riskiness of export sales and the conservatism of Australia's banking system. Such investment, combined with the likelihood of minimal sales for several years as the product is introduced, means significant losses must generally be absorbed for the first few years. Obviously, if the export drive fails, the viability of the business can be threatened. Compounding the risks involved is the complexity of marketing products in foreign lands to consumers with different tastes and a different culture, against foreign competitors. This risk and complexity means that many businesses decide against attempting to break into export markets and remain content with operating domestically. While firms may see significant potential gains through exporting, many are understandably not willing to risk everything for a chance at major gains.¹⁰⁷¹

These problems are decades old. As the Epsie report noted:

Many entrepreneurs discussed their difficulties in entering export markets... The single greatest obstacle they faced appeared to be the relative size of the financial and marketing effort required by a small Australian company to enter larger USA or Western European markets, even for niche products.¹⁰⁷²

In turn, the risk and uncertainty involved in exporting can result in financial institutions failing to provide finance to many sound export proposals, thereby limiting export expansion. The Hughes report noted:

Despite financial deregulation, exporting firms found it difficult to obtain funds from financial institutions. Lenders were often cautious in their assessment of risk, or perhaps found less risky opportunities to fund in protected domestic markets.¹⁰⁷³

In Australia, most firms are ineffective at marketing in the domestic market, let alone marketing in export markets. For example, many managers don't undertake external market research to test new product and service ideas.¹⁰⁷⁴ Even in the late 1980s, only

¹⁰⁷⁰ McKinsey and Company & the Australian Manufacturing Council Secretariat, op. cit., p.12.

¹⁰⁷¹ The thrust of this argument is made in Report of the Committee for Review of Export Market Development Assistance, op. cit., p.40,41,83,84.

¹⁰⁷² Australian Academy of Technological Sciences, op. cit., p.40.

¹⁰⁷³ Report of the Committee for Review of Export Market Development Assistance, op. cit., p.40.

¹⁰⁷⁴ Frederick G. Hilmer, op. cit., p.174,175.

25 per cent of Australian companies had marketing research departments.¹⁰⁷⁵ Marketing is often addressed as an afterthought, rather than as an integral part of the overall business plan. Many firms underinvest in marketing, particularly in harsh financial periods, when it is marketing that is so important in generating sales. The result is a long-term loss of viability as current customers are lost to competitors who market their products more effectively.¹⁰⁷⁶

The export marketing performance of Australian firms is generally poor. Most do not even attempt it. In 1994-95, only around four per cent of Australian firms exported. Of those firms that did export, 75 per cent exported directly to firms overseas, with the great majority of this to unrelated companies. Only 12 per cent of firms used overseas agents.¹⁰⁷⁷

Poor export marketing is impeding export growth in manufacturing and service industries. LEK found that service exporters rated marketing as by far their area of greatest competitive disadvantage. Many were unsatisfied with their marketing arrangements, with 28 per cent citing 'lack of market information' as a major constraint to the growth of their exports, while 28 per cent cited 'lack of offshore facilities', 26 per cent cited 'distance from markets' and 15 per cent cited 'language/culture'.¹⁰⁷⁸ Many of Australia's emerging ETM exporters from the McKinsey study were shown to have conducted their export marketing in an ad hoc way, relying on personal contacts and general impressions of market potential.¹⁰⁷⁹ The KPGM Peat Marwick 1993 *Manufacturing Survey* found that nearly 40 per cent of manufacturers rated 'lack of market knowledge' as the first, second or third major barrier effecting their ability to increase their international business over the next two years.¹⁰⁸⁰ Thus, many Australian firms do not undertake comprehensive export marketing. This results in the failure of many export projects, while other export drives miss opportunities for greater gains.

Many Australian firms also have difficulty gaining overseas representation, a key to successful export drives. *Emerging Exporters* reported that: 'Virtually every born global firm we interviewed had difficulties in developing overseas representation.'¹⁰⁸¹ Many had suffered bad experiences with overseas representation.¹⁰⁸²

There is also a shortfall of Australian workers and management with suitable qualifications and experience in exporting. The Hughes Report found that one third of first year Export Market Development Grants Scheme (EMDGS) claimants regarded the inability to access consultants with appropriate marketing skills as a major difficulty in export marketing. This lack of skills reduces exports by reducing

¹⁰⁷⁵ Philip Kotler, Peter Chandler, Rosalie Gibbs & Rodney McColl, op. cit., p.127.

¹⁰⁷⁶ John M. Legge, *The Competitive Edge*, op. cit., p.270,274.

¹⁰⁷⁷ Industry Commission & Department of Industry, Science and Tourism, op. cit., p.22,129.

¹⁰⁷⁸ LEK Partnership, op. cit., p.98,100.

¹⁰⁷⁹ McKinsey and Company & the Australian Manufacturing Council Secretariat, op. cit., p.11.

¹⁰⁸⁰ KPGM Peat Marwick, op. cit., p.22.

¹⁰⁸¹ McKinsey and Company & the Australian Manufacturing Council Secretariat, op. cit., p.12.

¹⁰⁸² *ibid.*, p.62.

the efficiency with which exporting occurs, and by fostering negative attitudes toward exporting among firms.¹⁰⁸³

The 1994 evaluation of the EMDGS found that Australia had still not developed a significant export culture, given that only around 200 companies had annual exports of more than \$25 million, and Australia's exports to GDP ratio was much lower than many industrial nations of similar size.¹⁰⁸⁴

Australia's weaknesses in marketing mean that, even where our firms overcome all the other market failures in the innovation chain and successfully produce innovative products, sales and exports are often gravely impeded by poor marketing.¹⁰⁸⁵

3. Rationalism and Export Marketing

In light of the crucial importance of export marketing and exports, coupled with massive market failure in the area and poor performance by most Australian firms in export marketing and exporting, what is the rationalist policy response?

The IC are against government assistance to export marketing. They have written:

...there is little evidence of widespread and significant spillover benefits to other firms from export market development activity. Yet such spill-overs provide the main rationale for firm-specific export assistance, such as the Export Market Development Grants scheme.¹⁰⁸⁶

The IC are also against any targeting of assistance to exports. They have written:

The Commission...disagrees with the proposition that program supports should be targeted at firms in the traded sector... Greater efficiency benefits the community irrespective of where in the economy it occurs.¹⁰⁸⁷

4. Industry Policies to Foster Excellence in Export Marketing

Fortunately, Labor disregarded hardline rationalist views on export marketing and demonstrated, through successful export marketing programs, that government can increase the level of sustainable export marketing and export sales beyond that achievable by the market alone.

Porter's study found that government policies should actively encourage an international outlook and exports, for example through provision of foreign market and technical information via networks of foreign offices.¹⁰⁸⁸ Labor had a sound

¹⁰⁸³ Report of the Committee for Review of Export Market Development Assistance, op. cit., p.44,73.

¹⁰⁸⁴ Philip Kotler, Peter Chandler, Rosalie Gibbs & Rodney McColl, op. cit., p.37.

¹⁰⁸⁵ Bureau of Industry Economics *R&D, Innovation and Competitiveness*, op. cit., p.27,34.

¹⁰⁸⁶ Industry Commission, *Submission to the Review of Business Programs*, op. cit., p.iv.

¹⁰⁸⁷ *ibid.*, p.31.

¹⁰⁸⁸ Michael E. Porter, op. cit., p.657.

record in this area. It established Austrade in 1986.¹⁰⁸⁹ By June 1996, Austrade had 99 offices in more than 80 countries able to provide Australian exporters with detailed market intelligence, including market research for specific firms.¹⁰⁹⁰ This work is complemented by the work of the Department of Foreign Affairs and Trade (DFAT), which provides a considerable amount of general export market information, particularly through their Country Economic Briefs, and can also refer firms to more specific information sources.¹⁰⁹¹

Together, Austrade's foreign and domestic networks of offices give general information and advice on export marketing, provided free or at low cost. For example: basic export marketing advice and referral is provided through the Export Hotline;¹⁰⁹² hundreds of seminars providing export advice and discussing opportunities in export markets are conducted annually; and a network of regional managers around Australia assist firms to break into export markets by providing general advice, and by introducing firms to Austrade's network and the services it provides. In 1995-96, regional managers helped 3,795 firms create \$270 million in exports.¹⁰⁹³ The foreign and domestic offices also provide: information, including market research, to assist firms to understand, select and enter export markets, for which firms generally pay 70 per cent of the cost; and detailed work to assist firms to expand their overseas business, for which firms pay full costs.¹⁰⁹⁴

The work of Austrade was also complemented by AusIndustry under Labor. Client managers provided free information and advice, and for firms requiring a high level of individual assistance, referral to accredited consultants, who, for a daily fee, often subsidised by government, helped firms to break into export markets by taking them through the various components of the export market development process.¹⁰⁹⁵

Labor also ran two major schemes to assist firms to break into export markets, namely the Export Market Development Grants Scheme (EMDGS) and the International Trade Enhancement Scheme (ITES).

The EMDGS provided taxable grants for expenditures incurred by SMEs in seeking out and developing export markets. The precise details of the scheme were changed over time. In 1994, annual grants re-imbursed 50 per cent of eligible expenditure incurred above \$15,000, subject to a minimum expenditure of \$30,000 and a maximum grant of \$250,000 per annum. Marketing expenditures eligible for reimbursement under the scheme included costs associated with: establishing overseas

¹⁰⁸⁹ Economic Planning Advisory Council, *International Trade Policy: Council Paper No.18*, Economic Planning Advisory Council, Canberra, 1986, p.25.

¹⁰⁹⁰ Austrade, *Australian Trade Commission Annual Report 1995-96*, Australian Government Publishing Service, Canberra, 1996, p.51.

¹⁰⁹¹ Barraclough and Co. & BSA Management, op. cit., p.8.

¹⁰⁹² Austrade, *Australian Trade Commission Annual Report 1995-96*, op. cit., p.52 reports that the Hotline is available to provide advice on exporting or referral for potential or current exporters, agents and traders and export consultants, with more than 70,000 inquiries answered in 1995-96.

¹⁰⁹³ Austrade, *Australian Trade Commission Annual Report 1995-96*, op. cit., p.52,54,60.

¹⁰⁹⁴ For details on the services provided by Austrade's foreign and domestic offices, see Austrade, *Australian Trade Commission Annual Report 1995-96*, op. cit., particularly pp.20-77.

¹⁰⁹⁵ Barraclough and Co. & BSA Management, op. cit., p.v,98.

representation (33 per cent of expenditures in 1992); producing brochures and advertising material (18 per cent of expenditure in 1992); fares; samples; tenders; communications; Australian consultants; overseas consultants; patent search, registration, renewal and insurance costs; and overseas visit allowance. There was a normal maximum of eight grants per claimant. However, from 1992-93, exporters who had received eight grants could get grants for up to three more years for each new market they entered, thereby encouraging further expansion by Australian firms into global markets. Between 1988 and 1993, the scheme assisted between 2,000 and 3,700 firms per annum to enter export markets, with average grants of \$42,000-\$67,000 per annum.¹⁰⁹⁶

Sensibly, Labor introduced a performance test into the scheme, which linked grants payable to export performance. The performance test does not apply to the first two years in the scheme, as firms develop export markets. Thereafter, firms must achieve strong export growth to gain maximum grants. Grants will only be paid up to 40 per cent of the claimant's exports in the third year, with the test harsher each year until grants of up to five per cent of total exports are provided from year seven.¹⁰⁹⁷ In this way, the program encouraged improved export performance by firms.

The EMDGS was very successful in increasing export sales. In 1995-96, \$202 million in grants were paid to 3,251 claimants, who, in turn, achieved \$5.7 billion in export sales, a ratio of exports to grants of 28:1.¹⁰⁹⁸ A 1994 evaluation estimated, on the basis of actual industry and year-in-scheme data comparing claimants and non-claimants, that EMDGS grant payments of \$156 million resulted in additional export marketing expenditure of \$147 million and incremental exports of \$1.4 billion, a multiple of nine times the value of grant payments. After firms have been in the scheme for a few years, they generally achieve exports 15-25 times the level of their marketing expenditure.¹⁰⁹⁹ The Hughes Report noted that, in 1987-88, firms that had been in the scheme for between six and fourteen years, achieved exports 35-57 times their marketing expenditure.¹¹⁰⁰ The scheme also appears to assist firms to enter more export markets. Claimants typically promote in three country markets in their first year of the scheme and this rises to an average of more than four by the sixth year.¹¹⁰¹

The EMDGS, in many cases, helps firms to make the transition from viewing exports opportunistically, to viewing exports as a core and growing part of their business. Exports as a percentage of a firm's turnover typically rise from around five per cent in the first year in the scheme, to around 20 per cent in the seventh and eighth years. For the period 1988-1992, average exports per claimant increased for each successive year in the scheme, from \$0.49 million in year one, to \$2.46 million in year eight.¹¹⁰² Importantly, 'graduate firms', or firms that have completed the full-cycle of eight grants, generally become even more export oriented after they exit the program. The

¹⁰⁹⁶ Austrade, *Helping to Meet the Export Challenge*, op. cit., p.5,7,14,39.

¹⁰⁹⁷ *ibid.*, p.6,16.

¹⁰⁹⁸ Austrade, *Australian Trade Commission Annual Report 1995-96*, op. cit., p.39.

¹⁰⁹⁹ Austrade, *Helping to Meet the Export Challenge*, op. cit., p.xv,15,17,26.

¹¹⁰⁰ Report of the Committee for Review of Export Market Development Assistance, op. cit., p.64.

¹¹⁰¹ Austrade, *Helping to Meet the Export Challenge*, op. cit., p.15,17.

¹¹⁰² *ibid.*, p.17.

vast majority of graduate firms maintain or increase their export marketing expenditure in all categories and, since their last year of EMDGS support, graduate firms, on average: market in six new export markets; achieve sales in four new export markets; promote five new products/services overseas; and export four new products/services overseas.¹¹⁰³

The scheme also appears to be encouraging Australia's emerging manufacturing and service exporters. In 1991-92, nearly 80 per cent of the claimants were from manufacturing or services.¹¹⁰⁴ The McKinsey report found that EMDGS was rated highly by the emerging exporters for: providing valuable finance, especially in the early years of exporting, when firms often suffer early losses on their exports; and playing a powerful psychological role in assisting domestic based firms to export.¹¹⁰⁵

On the basis that EMDGS was succeeding in its objective to encourage firms to seek out and develop new export markets, and due to the rise in exports fostered, the 1994 review recommended that the scheme be extended for a further five years.¹¹⁰⁶ It is testimony to the shortsightedness of hardline rationalism, that it was widely known that the Coalition intended to scrap the scheme when they came to office. It was only intense lobbying by stakeholders that ensured the scheme was only radically down-sized, rather than abolished, with total expenditure capped at \$150 million and eligible expenditure categories cut to six.¹¹⁰⁷

The establishment of the ITES was recommended by the Hughes Committee, in recognition of the fact that breaking into export markets involves significant investment in new capacity and marketing, and substantial risk, which causes many firms to avoid exporting.¹¹⁰⁸ Labor established the scheme in 1990-91. It was a discretionary program providing low interest loans or advances to firms with strong export prospects to assist them to develop export markets. Funds were available to support marketing related activities incurred offshore, such as travel and promotion, advertising, salaries and set-up costs. Applicants were selected on merit, based on their demonstrated capacity in international business, strong management skills, financial strength and commitment to the export project.¹¹⁰⁹ The ITES provided loans averaging \$1.5 million to SMEs and sought a 20:1 increase in export sales and repayment of the loan. To monitor performance, Austrade relied on detailed half-yearly and quarterly reports and the use of performance targets. This produced costs four times lower than those typically incurred where firms gained finance from development capital firms.¹¹¹⁰

¹¹⁰³ *ibid.*, p.27,28.

¹¹⁰⁴ *ibid.*, p.xiv.

¹¹⁰⁵ McKinsey and Company & the Australian Manufacturing Council Secretariat, *op. cit.*, p.14,51,52.

¹¹⁰⁶ Austrade, *Helping to Meet the Export Challenge*, *op. cit.*, p.xxvi.

¹¹⁰⁷ Austrade, *An Outline of the Export Market Development Grants Scheme*, Austrade, Sydney, 1996, provides details of the downsized scheme operating under the Coalition.

¹¹⁰⁸ Report of the Committee for Review of Export Market Development Assistance, *op. cit.*, p.83,84.

¹¹⁰⁹ Austrade, *Helping to Meet the Export Challenge*, *op. cit.*, p.46-48.

¹¹¹⁰ Marsden Jacob Associates, *op. cit.*, p.58.

The ITES also helped to address a market failure in the financial system in two key areas. Firstly, it provided funds to experienced exporters seeking to make a significantly increased commitment in export marketing, a task requiring long-term patient financing. Banks are reluctant to lend to many such high potential firms. Secondly, ITES provided funds for small, new, high potential, often technology-based 'born global' firms, which are often refused finance from the banking system due to lack of physical security. ITES met both these needs by providing low cost, medium to long-term loans, with deferred repayment terms.¹¹¹¹

The ITES was particularly successful. From 1990 to the end of 1995-96, \$178 million was committed to 118 participants, which produced around \$2.7 billion in export earnings in funded projects alone. There had been no bad debts from the scheme and loan repayments were 100 per cent of budgeted repayments.¹¹¹² The McKinsey report found that ITES was rated highly by the emerging exporters in terms of providing valuable finance, especially in the early years of exporting.¹¹¹³ A 1994 evaluation concluded it had successfully helped firms to increase their export marketing investment, break into export markets and expand their export sales. In addition, half the companies funded reported increased exports in non-ITES markets. In many cases, firms identified these opportunities via marketing activities undertaken for their ITES project. Participants generally agreed that the planning process imposed by the scheme had assisted them to develop a disciplined, structured approach to all their export activity. The scheme also appeared to influence competitors of ITES recipients to commence their own export marketing activities.¹¹¹⁴

In an act of economic rationalism at its worst, the scheme was terminated by the Coalition Government, effective 1 July 1996.¹¹¹⁵ (Labor in *Working Nation* had announced the extension of the scheme for a further four years with an allocation of \$50 million per year).¹¹¹⁶ Rather than being abolished, the scheme should be expanded. With significant marketing to promote the program among Australian firms, it appears likely that applications meeting the selection criteria could be received amounting to around \$100 million per annum.¹¹¹⁷ Given the success of the scheme in increasing export marketing and export sales way beyond that which could be achieved by relying on the market alone, and given the scheme was a revolving fund and had met with no bad debts, the scheme should be strongly

¹¹¹¹ Austrade, *Helping to Meet the Export Challenge*, op. cit., p.47. At p.47,48 it is explained that funding of five per cent of projected net foreign exchange earnings is available, normally up to \$2.25 million. For exceptional projects, projected to produce \$45 million over five years, up to \$5 million was available. For medium to low risk projects, six year loans were provided, interest free for three years and thereafter at interest of up to 40 per cent of the Commonwealth Bank Loan Reference rate. Initially, only firms with projected net foreign exchange earnings of at least \$20 million over five years were funded. This threshold was reduced to \$10 million following the findings of *Emerging Exporters*, which found that the scheme was excluding high potential emerging exporters.

¹¹¹² Austrade, *Australian Trade Commission Annual Report 1995-96*, op. cit., p.45-47.

¹¹¹³ McKinsey and Company & the Australian Manufacturing Council Secretariat, op. cit., p.51.

¹¹¹⁴ Austrade, *Helping to Meet the Export Challenge*, op. cit., p.52-57.

¹¹¹⁵ Austrade, *Australian Trade Commission Annual Report 1995-96*, op. cit., p.47.

¹¹¹⁶ *Working Nation: Policies and Programs*, op. cit., p.79.

¹¹¹⁷ Austrade, *Helping to Meet the Export Challenge*, op. cit., p.61,62 noted that demand for funds by firms that met the selection criteria exceeded \$60 million even though half the EMDGS graduates weren't even aware of the existence of the scheme.

marketed, with funding provided to any firms that can meet the criteria and successfully pass through the rigorous selection process.

Labor also established a number of other programs to assist firms to break into export markets. The Export Access Program (EAP) was established in October 1991¹¹¹⁸ to assist SMEs not currently exporting or new exporters to enter export markets on a sustainable basis. Funded and administered by Austrade, and delivered by Industry Associations, the EAP involves project managers providing advice to firms on the various elements of the export development process, including assistance with identifying export opportunities and preparing for market visits. Meetings are often arranged with prospective export partners.¹¹¹⁹ By the end of 1995-96, 1,566 companies had been assisted under EAP, which helped to generate \$84 million in exports.¹¹²⁰

Trade fairs are also an important source of export sales and the gaining of overseas distributors. In 1995-96, Austrade co-ordinated Australian participation at 82 trade fairs internationally. The 1,338 Australian companies involved reported \$187.3 million in on-site sales and anticipated they would earn more than \$3 billion in the 12 months following the fairs. Exhibitors appointed 872 agents and signed 404 joint venture arrangements.¹¹²¹

Labor commenced the Asia-Pacific Fellowship Program in 1991-92. It provided financial assistance to firms so they could place key managers and graduates in Asian markets for up to six months, to gain a greater understanding of the markets. Some 41 fellowships were offered in 1995-96. Between 1991-92 and 1995-96, participant companies reported exports of \$152.5 million, an export to grant ratio of 31:1.¹¹²²

Under the Asia-Business Links program, financial assistance was provided to Australian firms to bring important Asian market contacts (314 in 1995-96) to Australia for up to six months for training and experience in the firms operations. The scheme has contributed to \$133 million in exports, an export to grant ratio of 147:1.¹¹²³

Overall, in 1995-96, Austrade assisted firms to produce \$6.65 billion in exports. For 6 per cent of sales, firms stated they 'would not have made the sale without Austrade', in 18 per cent of cases, Austrade was 'a key factor in the success', while for 76 per cent of sales, Austrade was 'a positive factor'.¹¹²⁴

Labor also showed that government can help to increase sustainable exports beyond that achievable by the market alone by assisting the Export Finance Insurance

¹¹¹⁸ Industry Commission, *Annual Report 1991-92*, Australian Government Publishing Service, Canberra, 1992, p.230.

¹¹¹⁹ Barraclough and Co. & BSA Management, *op. cit.*, p.101.

¹¹²⁰ Austrade, *Australian Trade Commission Annual Report 1995-96*, *op. cit.*, p.55.

¹¹²¹ *ibid.*, p.60.

¹¹²² *ibid.*, p.61.

¹¹²³ *ibid.*, p.61.

¹¹²⁴ *ibid.*, p.31.

Corporation (EFIC) to expand its export finance and insurance activity.¹¹²⁵ EFIC facilitates increased exporting by accepting risks, through a range of finance and insurance services, that exporters and their financiers are unable to carry.¹¹²⁶ EFIC provides export credit insurance against non-payment of exporters due to political or commercial factors.¹¹²⁷ In 1996-97, \$6.6 billion of exports were covered by insurance against non-payment.¹¹²⁸ EFIC also supports the provision of additional working capital by lending institutions to finance work in progress on an export contract, where the exporter lacks additional security from its own resources.¹¹²⁹ In 1996-97, 36 export working capital guarantees supporting \$106 million of export contracts were provided.¹¹³⁰ EFIC also provides favourable finance terms to overseas buyers to enable export firms to compete with foreign competitors supported by government supported loans.¹¹³¹ In 1996-97, \$420 million in new loans were signed for capital goods and services, covering 43 contracts.¹¹³² Overall, in the five years ended 1996-97, EFIC supported, on its commercial account, \$30 billion in Australian exports.¹¹³³ While facilitating extra exports for Australia, EFIC remains self-financing, having built sufficient reserves to underpin substantial support for exporters in the future.¹¹³⁴

The success of Labor's export assistance demonstrates that government export marketing programs can increase exports and growth beyond that achievable by the market alone. Indeed, there appears to be some scope to build on Labor's achievements in export marketing. While Labor's policy regime assisted firms to become established in export markets and indeed expand their activity, it may be that more assistance is needed to help established innovative niche exporters to make the transition to becoming significant global players, a transition few Australian firms have been able to make. Australia's export performance is gravely impeded the fact that we have very few large global exporters. Given the small size of the Australian economy, establishing several clusters of large firms with major global export sales could make a major impact on Australia's current account and employment growth performance.

¹¹²⁵ Robert J. L. Hawke, Paul Keating, John Button & Department of Prime Minister and Cabinet, *Building a Competitive Australia: Statements by Prime Minister, Bob Hawke, Treasurer, Paul Keating and Industry Minister, John Button*, Australian Government Publishing Service, Canberra, 1991, p.1.9 announced the provision of \$200 million to EFIC's reserves to enable it to expand its export finance and insurance activity, as well as a further \$50 million to establish a bond facility in EFIC, to enable exporters to meet the demands of performance bonds without using their own reserves. *Working Nation: Policies and Programs*, op. cit., p.76 announced that: EFIC's Working Capital Guarantee facility was to be extended to cover exports of services and manufactured goods rather than simply capital goods; and the Performance Bond facility was expanded to provide Advance Payment Bonds to enable exporters to undertake export contracts, where they had the technical and financial capacity to do so, but lacked the assets needed to establish a bond facility.

¹¹²⁶ Export Finance and Insurance Corporation, *Annual Report 1997*, Australian Government Publishing Service, Canberra, 1997, p.1.

¹¹²⁷ Barraclough and Co. & BSA Management, op. cit., p.100.

¹¹²⁸ Export Finance and Insurance Corporation, op. cit., p.6.

¹¹²⁹ Barraclough and Co. & BSA Management, op. cit., p.100.

¹¹³⁰ Export Finance and Insurance Corporation, op. cit., p.6,19.

¹¹³¹ Barraclough and Co. & BSA Management, op. cit., p.100.

¹¹³² Export Finance and Insurance Corporation, op. cit., p.6.

¹¹³³ *ibid.*, p.2.

¹¹³⁴ *ibid.*, p.4.

To make the transition from innovative SMEs to major global players, firms must establish a significant marketing and distribution presence in export markets, through joint marketing ventures, opening a branch office, or making a greenfields investment in marketing and distribution networks. In a global environment, strategic partnerships in particular have become an important competitive weapon, allowing firms to perform better in international markets by combining their strengths with those of other firms.¹¹³⁵ Trading houses focused on particular sectors can also provide crucial infrastructure for export firms.

Various reports, such as McKinsey's *Emerging Exporters* and the Epsie report on high technology firms, have recommended that the Government encourage the establishment of such strategic, long-term marketing infrastructure in foreign markets.¹¹³⁶ While it is true that a handful of trading houses and joint ventures were funded under the EMDGS,¹¹³⁷ and the ITES provides financial assistance to help firms to expand their export activity, there is scope for the Government to play a more proactive role in assisting innovative firms to establish significant marketing and distribution infrastructure in export markets.

To achieve this, the Government could consider the ACTU's proposal that a new category be established in the EMDGS for certain innovative, export oriented sectors, where exporters of any size are eligible and can claim beyond the maximum grant amount.¹¹³⁸ This could apply where firms sought to establish joint ventures or make greenfield investments in marketing infrastructure in foreign markets.

Furthermore, the Government could use Australia's existing industry export networks to establish significant marketing infrastructure in key overseas markets. Under Labor, Austrade facilitated the formation of a range of industry export groups, usually comprising 30-50 firms, which undertook co-operative initiatives in export market development.¹¹³⁹ To build on this progress, the Government could act to ensure that: firstly, such industry export groups were established in all key innovative sectors; and secondly, seed funding was provided to enable such groups to develop export marketing facilities for their firms in key foreign markets.

To build up the skills and experience of Australian workers and management in export marketing, the Government could: ensure that business, management and

¹¹³⁵ Lee D. Dahringer & Hans Muhlbacher, op. cit., p.333.

¹¹³⁶ McKinsey and Company & the Australian Manufacturing Council Secretariat, op. cit., p.62,63, recommended that the Government should encourage joint ventures between Australian exporters and Asian firms to assist with their export marketing efforts, given the importance of establishing sound overseas representation and the great difficulties many firms have in gaining effective representation. Australian Academy of Technological Sciences, op. cit., p.18,19,40 recommended: increased assistance for the establishment of international marketing and distribution organisations for high technology products to enable small firms to overcome key difficulties in their efforts to break into export markets; and financial assistance to facilitate the establishment of Australian trading houses in major overseas high technology markets to provide SMEs with shared low cost accommodation, office facilities and other services necessary to enabling them to maintain a presence in such markets.

¹¹³⁷ Austrade, *Australian Trade Commission Annual Report 1995-96*, op. cit., p.45 noted that there were nine trading houses in the portfolio.

¹¹³⁸ ACTU/TDC Mission to Western Europe, op. cit., p.94,95.

¹¹³⁹ Australian Council of Trade Unions, *ACTU Submission Re Economic Statement*, Unpublished, 1992, p.24,25.

marketing courses include a comprehensive component in export marketing;¹¹⁴⁰ maintain and enhance Austrade's National Exporter Education Program, which promotes export training, and supports the establishment, upgrading and accreditation of export training courses;¹¹⁴¹ and maintain a sizeable pool of experienced export consultants through programs such as the Export Access Program.

Finally, active policies to open global markets can also assist to increase exports. Labor showed that even a small player like Australia can help to open markets in a range of ways.

Firstly, by establishing the Cairns Group of 14 fair trading agricultural exporters, Labor helped to ensure an organised push for free trade in the Uruguay Round of the General Agreement on Tariffs and Trade, even if the results were less than brilliant, due to the position and power of the United States, Japan and the European Community.

Secondly, the Government's leading role in establishing the Asia Pacific Economic Community (APEC) appears to have encouraged the opening of markets. In particular, the Bogor Declaration of December 1994, in which 18 Asia Pacific nations agreed to free and open trade and investment by 2020, with industrialised members to achieve this by 2010,¹¹⁴² will create great opportunities for export and jobs growth in Australia. As the Karpin report noted: '...the continued growth of Asian economies will create the demand for higher value-added products and services on a scale never before seen in history.'¹¹⁴³ While full implementation of the agreement remains far from certain, Labor's important role in negotiating the Bogor Declaration may lead to a very substantial increase in national income, exports and jobs growth.

¹¹⁴⁰ Report of the Committee for Review of Export Market Development Assistance, op. cit., p.42 supports the expansion of export education.

¹¹⁴¹ Austrade, *Australian Trade Commission Annual Report 1995-96*, op. cit., p.61 notes that initiatives in the 1995-96 year included the establishment of a database of export training courses, promotion of country specific training courses, upgrading and accreditation of export management courses, and the Export Skills program, which by June 1996, had supported 11 export training courses.

¹¹⁴² Bureau of Industry Economics, *Potential Gains to Australia from APEC: Open Regionalism and the Bogor Declaration - Occasional Paper 29*, Australian Government Publishing Service, Canberra, 1995, p.1.

¹¹⁴³ Industry Task Force on Leadership and Management Skills, op. cit., p.92.

Thirdly, Labor achieved significant gains through bilateral negotiations, such as the Closer Economic Relations agreement with New Zealand, which resulted in the removal of the great majority of barriers to trade between Australia and New Zealand.¹¹⁴⁴

These initiatives show that Governments in small nations can create enormous opportunities for export expansion through well-resourced, creative multilateral, regional and bilateral trade liberalisation initiatives.

¹¹⁴⁴ Department of Foreign Affairs and Trade, *Australia's Trade Development Program 1993-94: Budget Related Paper No.6*, Australian Government Publishing Service, Canberra, 1993, p.21.

Conclusion

This thesis examined whether economic rationalist policies, as implemented by Labor, and as recommended by rationalists in the period 1983 to 1996, were the key to achieving national competitive advantage, restructuring and employment growth.

The thesis produced three major conclusions.

The first conclusion is that, while the free market policies may have produced net benefits in restructuring, employment growth and national competitiveness, the benefits have been only moderate. Furthermore, these net benefits were achieved at the cost of significant social and economic dislocation.

In part one, three key rationalist policies implemented in the period - namely tariff cuts, free market infrastructure reform and small government policies - were examined. Each policy appeared to foster restructuring.

Tariff reductions contributed to restructuring, most particularly through: achieving input cost reductions; removing most of the assistance bias against exports; exposing firms to international competition, which forced firms to improve in order to survive; and stopping the practice of 'propping up' declining sectors, thereby encouraging them to become productive and survive, or decline and give up their resources for use in more efficient sectors. Crucially, tariff reform also ended Australia's fixation with the tariff as the key instrument for industry development. Tariff protection does nothing to address the major determinants of competitive advantage and indeed, can often delay much needed adjustment and upgrading.

Rationalist infrastructure reform fostered restructuring, primarily by reducing the prices charged by Australia's key economic infrastructure sectors. In particular, introducing competition in sectors formerly dominated by poorly performing government monopolies, such as in electricity, gas and telecommunications, brought significant efficiency improvements and cost reductions. Between 1987-88 and 1994-95, average real prices charged by GTEs fell roughly 17 per cent and labour productivity more than doubled.¹¹⁴⁵ Privatisation could also produce benefits if handled properly. In the context of a competitive national market, the profit motive engendered by private ownership could be expected to make some contribution to improved performance from infrastructure providers. Given that infrastructure costs are an important part of the input costs in many industries, infrastructure cost reductions must have assisted the restructuring of the Australian economy.

Cuts to government spending may have also contributed to restructuring by freeing up resources to be deployed by the private sector. This conclusion is consistent with the strong growth achieved during the main period of government spending cuts, from 1984 to 1989.

¹¹⁴⁵ Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1987-88 to 1992-93*, Industry Commission, Canberra, 1994, p.3,4; and Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators 1990-91 to 1994-95*, Industry Commission, Canberra, 1996, p.6.

Unfortunately however, it appears that the net benefits of these policies were only moderate. Each policy had key limitations. In particular, while each policy made a contribution to reducing costs, none had a strong effect on the development of the key capabilities that firms must master if they are to innovate, export and achieve fast growth and competitive advantage, such as R&D, management, best practice work organisation or export marketing. In addition, none of the policies made a substantial contribution to creating net employment growth. Even the IC's ORANI model made this finding in relation to tariff cuts and infrastructure reform. Meanwhile, chapter three found that, among OECD nations in the period, there was not a strong correlation between the size of government on the one hand, and economic growth, employment growth, unemployment, and the percentage of the working age population employed, on the other. Furthermore, neither tariff cuts, nor infrastructure reform, appear to improve the trade balance because they foster imports at least as much as they foster exports, meaning they make no net contribution to removing the external constraint on economic and employment growth.

Each of the policies also had significant weaknesses. In particular, each brought significant dislocation, which, in combination, appeared to involve the loss of several hundred thousand jobs. Unfortunately, free market reform is particularly prone to creating structural unemployment because assistance removal often leads to permanent job losses in particular sectors. This makes structural adjustment highly problematic. Where people become structurally unemployed, it can be particularly difficult for them to gain alternative employment. Where people experience prolonged unemployment, they often face very harsh social conditions, including poverty, which can strongly contribute to psychological and physical decline, and a range of socially negative behaviour. People in such difficult circumstances can not readily form the basis of a restructured Australian economy.

Rationalist policies also appeared to contribute to the significant dislocation experienced by many of Australia's regional areas. Because most people are unwilling or unable to move from areas that have suffered dislocation, free market reforms are producing numerous pools of long-term, structural unemployment in regions throughout Australia. In addition to producing major social costs, this dislocation has major economic costs. In particular, it produces a significant gross contribution to the hysteresis in Australia's unemployment rate, lowers production and involves significant adverse impacts on government outlays and revenue. Such dislocation could have been far worse had rationalist plans for more rapid reform been implemented. Rationalist policies may be more effective in destroying inefficient firms than fostering the creation of new firms.

Rationalists also tend to advocate rapid reform regardless of the economic context and the net impact of all government policies on employment. For example, rigorous tariff cuts and free market infrastructure reforms were continued during the worst recession in 60 years, and amidst very high interest rates. This combination of factors brought a significant rise in unemployment, which included an alarming rise in long term unemployment.

A key lesson of the period was that free market reforms are best implemented during periods of economic growth, and need to be accompanied by policies - such as those outlined in part two - which encourage growth and the redeployment of displaced labour.

The conclusion that free market reforms brought only moderate - rather than substantial - benefits, was broadly supported by the empirical evidence outlined in chapter four.

On the positive side, chapter four showed that, after decades of little beneficial structural change, the Labor Government helped to reverse the long run decline in Australia's exports to GDP ratio, continue with renewed vigour the reduction in commodity reliance, and begin the rapid growth of exports of ETMs and services. Australia's economic and employment growth were also strong by OECD standards, although this growth was only solid in absolute terms, and low compared to the growth achieved by the 'Asian tigers' in the period. The employment growth was also insufficient to substantially reduce unemployment, which remained high by OECD standards. The quality of the employment growth was also open to question. Nearly half the jobs created were part-time jobs, and in yearly averages, there were only 70,000 more full-time jobs in 1995-96 than there were in 1989-90.¹¹⁴⁶

On the negative side, Australia ran significant deficits on the trade and current accounts in the period, while the net foreign debt rose dramatically and national savings declined from an already low starting point. Australia also remains far too dependant on unprocessed commodities, which are in long run relative decline in world trade. Despite being a majority of world exports, Australia's ETM exports comprised only 23.4 per cent of Australia's merchandise exports in 1995-96, but were 75.5 per cent of Australia's merchandise imports.¹¹⁴⁷ Australia has also done little to capitalise on the potential to rapidly increase the growth of services exports. With this export structure, any growth of above 3.5 to 4 per cent appears to be unsustainable. Lagging living standards and mass unemployment will continue unless Australia can rapidly restructure its export base to ETMs and sophisticated services over the coming decades.

In sum, the evidence outlined in part one suggested that rationalist policies may have produced only moderate net beneficial effects for national competitiveness, restructuring and employment growth.

The second major conclusion of this thesis is that the overwhelming faith placed in free markets by rationalists in the period has the potential to reduce economic welfare.

In the period of the Hawke and Keating Labor Governments, the rationalist dominated economic bureaucracy became extreme, almost automatically prescribing

¹¹⁴⁶ Australian Bureau of Statistics, *Australian Economic Indicators June 1997*, Cat. no.1350.0, p.62; and Australian Bureau of Statistics, *Australian Economic Indicators January/February 1993*, Cat. no.1350.0, p.90. The figures are original figures.

¹¹⁴⁷ Department of Foreign Affairs and Trade, *Composition of Trade Australia 1995-96*, Department of Foreign Affairs and Trade, Canberra, 1996, p.19.

market policies in a vast array of economic policy areas. Little attempt was made to actively explore how active industry policies could improve economic outcomes. Rationalists often simply assumed that industry policies reduced economic welfare. This view has the potential to reduce economic welfare because the growth of the private sector and the economy as a whole, is, and has always been, dependent on government investment and support structures, such as the system of law and public administration and the public provision of health, education, economic infrastructure and scientific and technological expertise. These government support structures require constant reconstruction, not the dismemberment rationalists invariably advocate. In particular, the rationalist approach can impede the creation of economic prosperity by failing to build capacity in a range of areas crucial to national economic development, but subject to market failure. Australia's future economic development is crucially dependent on its economic elite refocussing on the key industry policy question, namely: 'In what areas and how can government investment improve economic welfare?'

In part one, this rationalist approach was argued to be flawed in two contexts.

Firstly, rationalists may have impeded economic growth by under-investing in the nation's economic infrastructure. This was evidenced by the fact that: a range of studies have indicated that public investment in economic infrastructure has played a key role in fostering economic growth in nations throughout the world, including Australia;¹¹⁴⁸ and many vital infrastructure projects were yet to be commenced or completed when the Labor lost power.

Secondly, the rationalist desire for small government appeared to preclude investments in a range of crucial areas. For example, too little was done to address the need to create a world-class vocational education and training system. It may be that a balance needs to be struck between minimising government spending and taxation on the one hand, and undertaking sufficient public investment to maximise the growth of the private sector and the overall economy on the other.

This brings us to the third, and most important, conclusion of the thesis. The key reason rationalism fails to substantially propel national competitiveness, restructuring and employment growth is that it fails to foster the creation of an innovation-driven economy. This conclusion is based on two key arguments.

Firstly, innovation is now the most important factor in creating national competitive advantage, restructuring and employment growth. A vast body of international literature, and the experience of many firms and nations, highlights that the key to national competitive advantage in most areas of world trade lies in being able to innovate, and, more specifically, produce and export sophisticated, high quality, innovative products, aimed at well defined market niches.¹¹⁴⁹ Where firms can create a product that is unique in value in the market, they can charge premium prices

¹¹⁴⁸ For example, see William Easterly & Sergio Rebelo 'Fiscal policy and economic growth: An empirical investigation', *Journal of Monetary Economics*, vol.32, 1993, pp.417-458.

¹¹⁴⁹ For example, see Michael E. Porter, *The Competitive Advantage of Nations*, op. cit., p.45,49-52,173,621

and/or achieve increased market share.¹¹⁵⁰ This competitive advantage can then be sustained by continuous innovation to upgrade and broaden the sources of advantage.

Innovation increases economic and employment growth because the creation of new products entails entirely new production. Innovation can thus bring growth through the creation of whole new firms, industry sectors or market segments, as well as through the spin-off growth they create for existing and new suppliers.¹¹⁵¹ In almost every industrialised nation, a small core of dynamic, innovative, export-oriented, high growth firms make a disproportionate contribution to national competitiveness, and to sales, export and employment growth. Innovation is the main driver of restructuring and employment growth.

To consistently compete on the basis of innovation, firms and nations must have strong capability in each area within the innovation chain, namely R&D, technological diffusion, work organisation, management, education and training, finance and export marketing. For example, sales of an innovative product will be constrained if the firm's workforce can not consistently produce high quality products, or if management can not effectively oversee export marketing strategies.

The second key argument underpinning this conclusion is that the rationalist paradigm can not create an innovation-driven economy because, in each of the key capabilities crucial to creating an innovation-driven economy, markets fail, yet rationalists are extremely reluctant to investigate, let alone formulate, industry policy initiatives which would support capacity building in these areas. While the reasons for market failure are not the same for each link in the innovation chain, common reasons are the presence of spillovers, lack of knowledge and information as to the importance of the task and how to perform it, and the complexity, cost and risk involved in undertaking the tasks. Without intelligent government action to create excellence in these key capabilities, Australia will remain unable to establish an innovation-driven economy.

Not surprisingly, given market failure and the lack of effective government action, Australia has acute weaknesses in each area of the innovation chain. In R&D, Australia's BERD to GDP ratio is still around one third less than the OECD average,¹¹⁵² only a small minority of firms consistently perform R&D, and the linkages between public researchers and industry remain weak. The up-take of new technology by Australian industry, in general, lags three to eight years behind our competitors,¹¹⁵³ and Australia's technology infrastructure remains vastly under-

¹¹⁵⁰ John M. Legge, *The Competitive Edge: How Innovation Creates and Sustains the Competitive Advantage of Enterprises*, Allen and Unwin, North Sydney, New South Wales, 1992, p.32,33,35; and Jenny Stewart, *The Lie of the Level Playing Field: Industry Policy and Australia's Future*, Text Publishing, Melbourne, 1994, p.54.

¹¹⁵¹ Metal Trades Unions, *Policy for Industry Development and More Jobs*, Metal Trades Unions, Melbourne, 1984, p.265-267.

¹¹⁵² Figures calculated at my request by the Science and Technology Policy Branch, Department of Industry, Science and Tourism, August 1998. Note that the OECD average is only for the 19 countries for which reliable data was available namely Ireland, Australia, Sweden, Denmark, Canada, Finland, Austria, Norway, France, New Zealand, Japan, Spain, United States, Belgium, United Kingdom, Netherlands, Italy, Germany and Switzerland.

¹¹⁵³ *Working Nation: Policies and Programs*, Australian Government Publishing Service, Canberra, 1994, p.65.

developed. Best practice work organisation has been embraced by only a small minority of firms. Australia's managers are among the worst in the OECD and are particularly weak in fostering innovation and entrepreneurship.¹¹⁵⁴ While skills are crucial to innovation and national competitiveness, Australia continues to under-invest in education, particularly in public secondary education. The vocational system is also particularly under-developed, including in key areas of relevance to creating an innovative economy. Additionally, disadvantaged groups continue to be denied equal access to the education system, and participation in upper-secondary and tertiary education is still far too low to build and sustain an innovative, competitive economy. A number of market failures continue to exist in the financial system. Most importantly, Australia has not developed a sufficiently large informal equity market, or a substantial formal venture and development capital market. The result is that too many innovative SMEs can not gain access to equity capital and many innovative product ideas are therefore never commercialised, at least in Australia. Finally, few firms have developed significant export marketing capability, and Australia continues to have an export to GDP ratio lower than most industrialised nations,¹¹⁵⁵ and lower than consistent with an innovative economy. As a consequence of these weaknesses throughout the innovation chain, Australia is unable to compete to a significant degree on the basis of innovation.

What was the rationalist response to such a situation? Hardline rationalists were focused on the establishment of market-based policies and paid little attention to how government policies could foster innovation. In most areas of the innovation chain, hardline rationalists denied the existence of market failure, despite substantial evidence to the contrary, and despite the significant weakness of the Australian performance throughout the innovation chain over recent decades. In none of the links of the innovation chain have rationalists made a substantial effort to formulate policies to foster Australian excellence in the capability. In short, rationalists make no attempt to foster the creation of an innovation-driven economy.

Without government support to build up capacity in each link in the innovation chain, the great bulk of Australian firms will remain unable to continuously innovate, and Australia will be unable to compete on global markets to a significant degree in vital innovation-intensive sectors, such as ETMs and advanced services. Such an approach will not bring the new firms and sectors that constitute effective restructuring.

Fortunately, Labor did not always follow rationalist advice. Where they did implement progressive policies, they often succeeded in fostering competence in innovative capabilities. For example, in R&D, Labor's suite of progressive policies assisted in producing an increase in BERD from 0.26 per cent of GDP in 1983 to 0.87 per cent of GDP in 1995.¹¹⁵⁶ In export marketing, progressive policies assisted

¹¹⁵⁴ IMD, *World Competitiveness Yearbook 1996*, IMD, Lausanne, Switzerland, 1996, p.63,511,515.

¹¹⁵⁵ *ibid.*, p.386.

¹¹⁵⁶ Figures calculated at my request by the Science and Technology Policy Branch, Department of Industry, Science and Tourism, August 1998. Note that the OECD average is only for the 19 countries for which reliable data was available namely Ireland, Australia, Sweden, Denmark, Canada, Finland, Austria, Norway, France, New Zealand, Japan, Spain, United States, Belgium, United Kingdom, Netherlands, Italy, Germany and Switzerland.

numerous firms to break into global markets and achieve sales, collectively, in the billions.¹¹⁵⁷

However, while Labor did veer marginally from the rationalist market prescription in some areas, it failed to create excellence in any elements of the innovation chain. Inadequate investment in those areas it did address, and, more particularly, the failure to adopt significant reforms in the remaining capabilities in the innovation chain, was the key reason Labor failed to create an innovation-driven economy. This meant that, where Australian firms sought to commercialise innovative ideas, too often they could not gain patient finance, and where they did, too often their work organisation, management, up-take of advanced technology and marketing were too sub-standard to fully capitalise on the innovative research ideas.

The Federal Government should make innovation the key focus of their economic strategy. By building national capability in each link in the innovation chain, the Government could help to create an innovative economy, and thereby assist in creating competitive advantage, restructuring and economic and employment growth.

In this thesis, numerous government policies and programs that could help to create excellence in each component of the innovation chain were outlined. While some will disagree with some of the ideas, the aim of the exercise was to shift the debate into the difficult areas beyond rationalism's 'no industry policy' prescription. The most important economic questions lie beyond these simple prescriptions that dominate mainstream Australian economic rationalism, in the areas where there is market failure and where active government policies may be able to foster competitive advantage. It is through research and policy creativity in these areas that an innovative, competitive economy can be built.

With respect to the development of an innovation-driven economy, Australia has 'an advantage of backwardness'.¹¹⁵⁸ Given the extent of the weaknesses throughout the innovation chain and the worldwide examples of successful solutions to many of the problems, there is a considerable layer of clearly growth-inducing industry policy the Federal Government could implement, before it got to areas in which it was uncertain whether the benefits of government activity outweighed their cost. A strategic industry policy directed to creating an innovation-driven economy could do much to drive employment growth, foster restructuring and create national competitive advantage.

¹¹⁵⁷ Austrade, *Australian Trade Commission Annual Report 1995-96*, Australian Government Publishing Service, Canberra, 1996, p.31.

¹¹⁵⁸ This term was used in the United States context in Stephen S. Cohen & John Zysman, *Manufacturing Matters: The Myth of the Post-Industrial Economy*, Basic Books Inc., New York, USA, 1987, p.242.

Bibliography

Books

Primary Sources

- Andrews, Les & Karmel, Tom, *Regional Labour Markets: Dynamic Aspects of Unemployment*, Unpublished, 1993.
- Arthur Anderson, *Strategic Study on Development Capital*, Arthur Anderson, n.p., 1997.
- Austrade, *Australian Trade Commission Annual Report 1995-96*, Australian Government Publishing Service, Canberra, 1996.
- Austrade, *Helping to Meet the Export Challenge*, Austrade, Sydney, 1994.
- Australian Academy of Technological Sciences, *Developing High Technology Enterprises for Australia: A Report Prepared by the High Technology Financing Committee of the Australian Academy of Technological Sciences for the Minister for Science and Technology*, Australian Academy of Technological Sciences, Parkville, Victoria, 1983.
- Australian Bureau of Statistics, *Australian Economic Indicators*, various edns, Cat. no.1350.0.
- Australian Bureau of Statistics, *Australians' Employment and Unemployment Patterns 1994-1997*, Cat. no.6286.0.
- Australian Bureau of Statistics, *Australian National Accounts: National Income, Expenditure and Product*, various edns, Cat. no.5204.0.
- Australian Bureau of Statistics, *Australian National Accounts: State Accounts*, various edns, Cat. no.5220.0.
- Australian Bureau of Statistics, *Balance of Payments Australia*, various edns, Cat. no.5303.0.
- Australian Bureau of Statistics, *Causes of Death Australia 1991*, Cat. no.3303.0.
- Australian Bureau of Statistics, *Employed Wage and Salary Earners Australia*, various edns, Cat. no.6248.0.
- Australian Bureau of Statistics, *Employee Earnings and Hours Australia May 1995*, Cat. no. 6306.0
- Australian Bureau of Statistics, *Innovation in Australian Manufacturing 1994*, Cat. no.8116.0.
- Australian Bureau of Statistics, *Innovation in Manufacturing 1996-97*, Cat. no.8116.0.
- Australian Bureau of Statistics, *Innovation in Industry 1993-94*, Cat. no.8117.0.

- Australian Bureau of Statistics, *International Trade in Services Australia 1992-93*, Cat. no.5354.0.
- Australian Bureau of Statistics, *Labour Force Australia*, various edns, Cat. no.6203.0.
- Australian Bureau of Statistics, *Labour Force Australia 1978-95*, Cat. no.6204.0.
- Australian Bureau of Statistics, *Labour Force Status and Other Characteristics of Families Australia June 1996*, Cat. no.6224.0.
- Australian Bureau of Statistics, *Labour Mobility Australia*, various edns, Cat. no.6209.0.
- Australian Bureau of Statistics, *Tasmanian Statistical Indicators*, various edns, Cat. no.1303.6.
- Australian Bureau of Statistics, *Year Book Australia*, Australian Bureau of Statistics, Canberra, various edns.
- Australian Council of Trade Unions, *A Program Towards Full Employment: The ACTU's Program for Sustainable Employment and Jobs Growth for the 1990s and Beyond*, Australian Council of Trade Unions, Melbourne, 1993.
- ACTU/TDC Mission to Western Europe, *Australia Reconstructed: ACTU/TDC Mission to Western Europe: A Report by the Mission Members to the ACTU and the TDC*, Australian Government Publishing Service, Canberra, 1987.
- Australian Industries Assistance Commission, *Structural Change in Australia*, Australian Government Publishing Service, Canberra, 1977.
- Australian Institute of Health and Welfare, *Australia's Welfare: Services and Assistance*, Australian Government Publishing Service, Canberra, various edns.
- Australian Labor Party, *Shaping the Nation: Achievements of the Labor Government*, Australian Labor Party, Canberra, 1995.
- Australian Manufacturing Council & McKinsey and Company, *The Wealth of Ideas: How Linkages Help Sustain Innovation and Growth*, Australian Manufacturing Council, Melbourne, 1994.
- Australian Postal Corporation, *1985 Tenth Annual Report*, Government Printer, Canberra, 1985.
- Balderstone, James Scholfield & the Department of Primary Industry, *Agricultural Policy: Issues and Options for the 1980s: Working Group Report to the Minister for Primary Industry*, Australian Government Publishing Service, Canberra, 1982.
- Barraclough and Co., *Enterprise Improvement Through Innovation: A Study for AusIndustry by Barraclough and Co.*, Barraclough and Co., n.p., 1996.
- Barraclough and Co. & BSA Management, *Winning Exports*, Pitman Publishing, South Melbourne, Victoria, 1996.

- Barro, R.J., *A Cross-Country Study of Growth, Saving and Government: National Bureau of Economic Research Working Paper No.2855*, National Bureau of Economic Research, Cambridge, Massachusetts, USA, 1989.
- Brigden, J.B., Copland, D.B., Dyason, E.C., Giblin, L.F. & Wickens, C.H., *The Australian Tariff: An Economic Enquiry*, Melbourne University Press in association with MacMillan & Co. Ltd., Melbourne, 1929.
- Bureau of Industry Economics, *Recent Developments in the Theory of Economic Growth: Policy Implications: Occasional Paper 11*, Australian Government Publishing Service, Canberra, 1992.
- Bureau of Industry Economics, *R&D, Innovation and Competitiveness: An Evaluation of the Research and Development Tax Concession: Research Report 50*, Australian Government Publishing Service, Canberra, 1993.
- Bureau of Industry Economics, *International Performance Indicators: Overview: Research Report 53*, Australian Government Publishing Service, Canberra, 1994.
- Bureau of Industry Economics, *Jobs Growth and Decline: Recent Employment Changes in Small and Large Business: Occasional Paper 21*, Australian Government Publishing Service, Canberra, 1994.
- Bureau of Industry Economics, *Potential Gains to Australia from APEC: Open Regionalism and the Bogor Declaration - Occasional Paper 29*, Australian Government Publishing Service, Canberra, 1995.
- Catalyst Institute, *Study of a Growth Equity Market for Australia*, Department of Industry, Science and Tourism, Canberra, 1997.
- Committee on Employment Opportunities, *Restoring Full Employment: A Discussion Paper*, Australian Government Publishing Service, Canberra, 1993.
- Committee to Advise on Policies for Manufacturing Industry, *Policies for Development of Manufacturing Industry: A Green Paper*, vols 1 & 3, Australian Government Publishing Service, Canberra, 1975.
- Coopers & Lybrand, *Scoreboard 97*, Department of Industry, Science and Tourism, Canberra, 1997.
- Coopers & Lybrand, *The Economic Impact of Venture Capital*, Department of Industry, Science and Tourism, Canberra, 1997.
- Crawford, John Grenfell, *A Commission to Advise on Assistance to Industries: Report*, Australian Government Publishing Service, Canberra, 1973.
- Crawford, John, Inglis, Brian, Hawke, R. L. J. & Currie, N. S., *Study Group on Structural Adjustment: Report*, Australian Government Publishing Service, Canberra, 1979.

- Dahringer, Lee D. & Muhlbacher, Hans, *International Marketing*, Addison-Wesley Publishing Company, Sydney, 1991.
- Department of Employment and Industrial Relations, *Industrial Democracy and Employee Participation: A Policy Discussion Paper*, Australian Government Publishing Service, Canberra, 1986.
- Department of Employment, Education and Training, *Committee to Review Higher Education Research Policy: Report*, Australian Government Publishing Service, Canberra, 1989.
- Department of Employment, Education and Training, *Australia's Workforce in the Year 2001*, Australian Government Publishing Service, Canberra, 1991.
- Department of Employment, Education and Training, *Natural Labour Markets in Australia*, Australian Government Publishing Service, Canberra, 1993.
- Department of Employment, Education and Training, *Small Area Labour Markets Australia*, Department of Employment, Education and Training, Canberra, various edns.
- Department of Employment, Education and Training & Dawkins, John, *Higher Education: A Policy Statement*, Australian Government Publishing Service, Canberra, 1988.
- Department of Employment, Education, Training and Youth Affairs, *Small Area Labour Markets Australia*, Department of Employment, Education, Training and Youth Affairs, Canberra, various edns.
- Department of Foreign Affairs and Trade, *Australia's Trade Development Program 1993-94: Budget Related Paper No.6*, Australian Government Publishing Service, Canberra, 1993.
- Department of Foreign Affairs and Trade, *Composition of Trade Australia*, Department of Foreign Affairs and Trade, Canberra, various edns.
- Department of Industrial Relations, *Best Practice in Action*, Department of Industrial Relations, Canberra, 1995.
- Department of Industry, Science and Tourism, *Annual Report*, Australian Government Publishing Service, Canberra, various edns.
- Department of Industry, Science and Tourism, *Australian Science and Technology at a Glance 1997*, Australian Government Publishing Service, Canberra, 1997.
- Economic Planning Advisory Council, *International Trade Policy: Council Paper No.18*, Economic Planning Advisory Council, Canberra, 1986.
- Economic Planning Advisory Council, *Australia's Medium Term Growth Potential: Council Paper No.30*, Australian Government Publishing Service, Canberra, 1988.

- Economic Planning Advisory Council, *Regional Policies: Future Directions: Papers Presented at the Office of EPAC Seminar*, Australian Government Publishing Service, Canberra, 1990.
- Economic Planning Advisory Council, *Origins of the 1990-91 Recession in Australia: Two Papers Prepared for the Office of EPAC: Background Paper No.18*, Australian Government Publishing Service, Canberra, 1992.
- Economic Planning Advisory Council, *Unemployment in Australia: Council Paper No.51*, Australian Government Publishing Service, Canberra, 1992.
- Economic Planning Advisory Council, *Human Resource Management and Workplace Change: Proceedings of an EPAC Roundtable held in Canberra on 6 February 1995 - Council Paper No.8*, Australian Government Publishing Service, Canberra, 1995.
- Ernst and Young & the Centre for Innovation and Enterprise, *Investment Readiness Study: A Report Produced by Ernst & Young and the Centre for Innovation and Enterprise for the Department of Industry, Science and Tourism*, Australian Government Publishing Service, Canberra, 1997.
- Export Finance and Insurance Corporation, *Annual Report 1997*, Australian Government Publishing Service, Canberra, 1997.
- Filmer, Richard & Dao, Dan, *Economic Effects of Microeconomic Reform: Economic Planning Advisory Council Background Paper No.38*, Australian Government Publishing Service, Canberra, 1994.
- Fitzgerald, V.W., *National Saving: A Report to the Treasurer*, Australian Government Publishing Service, Canberra, 1993.
- Forn/Kerry International & the Australian Institute of Company Directors, *Boards of Directors in Australia, Fifteenth Study 1996*, Forn/Kerry International & the Australian Institute of Company Directors, Sydney, 1996.
- Garnaut, Ross, *Australia and the Northeast Asian Ascendancy: Report to the Prime Minister and the Minister for Foreign Affairs and Trade*, Australian Government Publishing Service, Canberra, 1989.
- Gaskill, Stephen, *A Solid Investment: Making Full Use of the Nation's Human Capital: Recommendations of the Federal Glass Ceiling Commission*, Federal Reserve Bank of St Louis Missouri, Washington D. C., 1995.
- Hawke, Robert J. L., Keating, Paul, Button, John & Department of Prime Minister and Cabinet, *Building a Competitive Australia: Statements by Prime Minister, Bob Hawke, Treasurer, Paul Keating and Industry Minister, John Button*, Australian Government Publishing Service, Canberra, 1991.
- Higher Education Financing and Policy Review Committee, *Learning for Life: Review of Higher Education Financing and Policy: A Discussion Paper*, Australian Government Publishing Service, Canberra, 1997.

- Hilmer, Frederick G., Rayner, Mark & Taperell, Geoffery, *National Competition Policy: Report by the Independent Committee of Inquiry*, Australian Government Publishing Service, Canberra, 1993.
- Howard, John, *More Time for Business: Statement by the Prime Minister, the Hon John Howard MP*, Australian Government Publishing Service, Canberra, 1997.
- Howard, John & Department of Industry, Science and Tourism, *Investing for Growth: the Howard Government's Plan for Australian Industry*, Department of Industry, Science and Tourism, Canberra, 1997.
- House of Representatives Standing Committee on Industry, Science and Technology, *Small Business in Australia: Report by the House of Representatives Standing Committee on Industry, Science and Technology*, Australian Government Publishing Service, Canberra, 1990.
- IMD, *World Competitiveness Yearbook 1996*, IMD, Lausanne, Switzerland, 1996.
- Independent Parliamentary Inquiry Into Tariffs and Industry Development: Final Report*, Unpublished, 1993.
- Industry Assistance Commission, *Assistance to Agricultural and Manufacturing Industries: Information Paper*, Australian Government Publishing Service, Canberra, 1987.
- Industry Commission, *Annual Report*, Australian Government Publishing Service, Canberra, various edns.
- Industry Commission, *The Automotive Industry: Report No.5*, Australian Government Publishing Service, Canberra, 1990.
- Industry Commission, *Availability of Capital: Report No.18*, Australian Government Publishing Service, Canberra, 1991.
- Industry Commission, *Energy Generation and Distribution: Report No.11*, 3 vols, Australian Government Publishing Service, Canberra, 1991.
- Industry Commission, *Exports of Education Services: Report No.12*, 3 vols, Australian Government Publishing Service, Canberra, 1991.
- Industry Commission, *Rail Transport: Report No.13*, 2 vols, Australian Government Publishing Service, Canberra, 1991.
- Industry Commission, *Water Resources and Water Waste Disposal: Report No.26*, Australian Government Publishing Service, Canberra, 1992.
- Industry Commission, *Impediments to Regional Industry Adjustment Draft Report*, 2 vols, Industry Commission, Canberra, 1993.
- Industry Commission, *Port Authority Services and Activities: Report No.31*, Australian Government Publishing Service, Canberra, 1993.

- Industry Commission, *Research and Development: Report No.44*, Australian Government Publishing Service, Canberra, 1995.
- Industry Commission, *The Growth and Revenue Implications of Hilmer and Related Reforms: A Report by the Industry Commission to the Council of Australian Governments*, Australian Government Publishing Service, Canberra, 1995.
- Industry Commission & Department of Industry, Science and Tourism, *A Portrait of Australian Business: Results of the 1995 Business Longitudinal Survey*, Australian Government Publishing Service, Canberra, 1997.
- Industry Task Force on Leadership and Management Skills, *Enterprising Nation: Renewing Australia's Managers to Meet the Challenges of the Asia-Pacific Century: Report of the Industry Task Force on Leadership and Management Skills: Executive Summary*, Australian Government Publishing Service, Canberra, 1995.
- Kotler, Philip, Chandler, Peter, Gibbs, Rosalie & McColl, Rodney, *Marketing in Australia*, 2nd edn, Prentice Hall, Sydney, 1989.
- KPMG Peat Marwick, *1993 Manufacturing Survey*, KPMG, Sydney, 1993.
- Lattimore, R., Martin, B., Madge, A. & Mills, J., *Design Principles for Small Business Programs and Regulations*, AusInfo, Canberra, 1998.
- Legge, John M., *The Competitive Edge: How Innovation Creates and Sustains the Competitive Advantage of Enterprises*, Allen and Unwin, North Sydney, New South Wales, 1992.
- LEK Partnership, *Intelligent Exports...and the Silent Revolution in Services*, Australian Trade Commission, Sydney, 1994.
- Marsden Jacob Associates, *Financing Growth: Policy Options to Improve the Flow of Capital to Australia's Small and Medium Enterprises*, The National Investment Council, Department of Industry, Science and Tourism, Canberra, 1995.
- McKinsey and Company & the Australian Manufacturing Council Secretariat, *Emerging Exporters: Australia's High Value-Added Manufacturing Exporters: Final Report of the Study by McKinsey & Company and the Australian Manufacturing Council Secretariat to the Australian Manufacturing Council*, Australian Manufacturing Council, Melbourne, 1993.
- National Institute of Economic and Industry Research, *The South Australian Economy and the 1990 Decade: A Report for the South Australian Manufacturing Advisory Council*, National Institute of Economic and Industry Research, Adelaide, 1992.
- Office of Employment, Department of Employment and Training Victoria, *Restructuring of the Passenger Motor Vehicle and Textiles Clothing and Footwear Industries in Victoria: An Overview of the Impact on Employees*, Department of Employment and Training, Melbourne, 1991.

- Organisation for Economic Co-operation and Development, *OECD Economic Outlook June 1996*, Organisation for Economic Co-operation and Development, Paris, 1996.
- Organisation for Economic Co-operation and Development, *Technology and Industrial Performance: Technology Diffusion, Productivity, Employment and Skills, International Competitiveness*, Organisation for Economic Co-operation and Development, Paris, 1996.
- Pappas, Carter, Evans & Koop/Telesis, *The Global Challenge: Australian Manufacturing in the 1990s: Final Report of the Pappas, Carter, Evans and Koop/Telesis Study*, Australian Manufacturing Council, Melbourne, 1990.
- Parliamentary Inquiry Into Tariffs and Industry Development: Fifth Interim Report*, Unpublished, 1993.
- Porter, Michael E., *The Competitive Advantage of Nations*, The Free Press, New York, USA, 1990.
- Price Waterhouse, *The Longer Term Impacts of Participation in AusIndustry Enterprise Improvement Programs: Report for the Office of AusIndustry*, Price Waterhouse, Canberra, 1996.
- Productivity Commission, *Stocktake of Progress on Microeconomic Reform*, Australian Government Publishing Service, Canberra, 1996.
- Rail Industry Council, *Rail into the 21st Century: A Rail Industry Council Discussion Paper*, Australian Government Publishing Service, Canberra, 1990.
- Report of the Committee for Review of Export Market Development Assistance, *Australian Exports: Performance Obstacles and Issues of Assistance: Report of the Committee for Review of Export Market Development Assistance*, Australian Government Publishing Service, Canberra, 1989.
- Small Business Credit Insurance Corporation, *Japanese CIC 1996*, Small Business Credit Insurance Corporation, Tokyo, Japan, 1996.
- State Bank of New South Wales & Chamber of Manufactures of New South Wales, *Survey of Manufacturing Conditions and Future Prospects in N.S.W.: March Quarter 1993*, State Bank of New South Wales & Chamber of Manufactures of New South Wales, Sydney, 1993.
- Steering Committee on National Performance Monitoring of Government Trading Enterprises, *Government Trading Enterprises Performance Indicators*, Industry Commission, Canberra, various edns.
- Styles, Chris & Ambler, Tim, *First Steps to Export Success: A Project by the PAN'AGRA Research Programme of London Business School with the Support of British Overseas Trade Board*, Australian Trade Commission, British Overseas Trade Board Secretariat, London & Australian Trade Commission, Sydney, 1997.

- Taskforce on Regional Development, *Developing Australia: A Regional Perspective: A Report to the Federal Government by the Taskforce on Regional Development*, 2 vols, The Taskforce on Regional Development, Canberra, 1993.
- Taylor, Michael, *The Regional Impact of Changing Levels of Protection in Australian Industries*, Office of Local Government, n.p., 1992.
- Treasury, *Budget Papers 1985-86: Statement No.2*, Australian Government Publishing Service, Canberra, 1995.
- Welbourne, Michael, Wardrop, Martin & Bryant, Kevin, *The Pace of Change: Technology Uptake and Enterprise Improvement: An Occasional Paper in a Series on Research and Technology, and their Utilisation in Australia*, Australian Government Publishing Service, Canberra, 1994.
- Western, John S., *Social Inequality in Australian Society*, MacMillan, Melbourne, 1983.
- White Paper on Manufacturing Industry*, Australian Government Publishing Service, Canberra, 1977.
- Womack, James P., Jones, Daniel T. & Roos, Daniel, *The Machine that Changed the World*, Macmillan, New York, USA, 1990.
- Women's Bureau, Department of Employment, Education and Training, *Australian Women's Employment Strategy: 1989-90 Report*, Australian Government Publishing Service, Canberra, 1990.
- Working Nation: Policies and Programs*, Australian Government Publishing Service, Canberra, 1994.
- Working Nation: The White Paper on Employment and Growth*, Australian Government Publishing Service, Canberra, 1994.
- World Trade Organisation, *International Trade: Trends and Statistics 1995*, World Trade Organisation, Geneva, 1995.
- World Trade Organisation, *Annual Report 1996*, vol.1, World Trade Organisation, Geneva, 1996.
- Yetton, Phillip, Davis, Jeremy & Swan, Peter, *Going International: Export Myths and Strategic Realities: Report to the Australian Manufacturing Council*, Australian Graduate School of Management Ltd, Kensington, New South Wales, 1992.

Secondary Sources

- Allen, Sheila, Waton, Alan, Purcell, Kate & Wood, Stephen, (eds), *The Experience of Unemployment*, MacMillan, Basingstoke, Great Britain, 1986.
- Anderson, Kym & Garnaut, Ross, *Australian Protectionism: Extent, Causes and Effects*, Allen and Unwin, Sydney, 1987.

- Anderson, Palle & Gruen, David, *Macroeconomic Policies and Growth: Research Discussion Paper*, Reserve Bank of Australia, Sydney, 1995.
- Battin, Tim & Smythe, Paul, *From War Economy to Deregulation: Australian Keynesianism in the Long Run*, Unpublished, 1998.
- Botsman, Peter, *Creating Jobs In Europe: Strategies and Lessons for Australia: A Report on the First European Jobs Summit*, Evatt Foundation, n.p., 1993.
- Brewer, Graeme, *Out of Work, Out of Sight: Study of the Impact of Unemployment on a Group of Australian People*, The Brotherhood of St Laurence, Fitzroy, Victoria, 1980.
- Camilleri, Joe, Christoff, Peter, Frankel, Boris, Watts, Rob & Wiseman, John, The Melbourne Economics Group, *New Economic Directions for Australia*, Centre for Australian Social Policy Analysis, Coburg, Victoria, 1989.
- Carroll, John & Manne, Robert (eds), *Shutdown: The Failure of Economic Rationalism and How to Rescue Australia*, Text Publishing Company, Melbourne, 1992.
- Castle, Robert & Morgan, John (eds), *Australian Studies: Unemployment in the Eighties*, Longman Cheshire, Melbourne, 1984.
- Cohen, Stephen S. & Zysman, John, *Manufacturing Matters: The Myth of the Post-Industrial Economy*, Basic Books Inc., New York, USA, 1987.
- Costa, Michael & Easson, Michael (eds), *Australian Industry: What Policy?*, Pluto Press in Association with the Lloyd Ross Forum of the Labor Council of New South Wales, Leichhardt, New South Wales, 1991.
- Crough, Greg & Wheelwright, Ted, *Australia: A Client State*, Penguin Books, Ringwood, Victoria, 1982.
- David, Abe & Wheelwright, Ted, *The Third Wave: Australian and Asian Capitalism*, Left Book Club Co-operative, Newtown, New South Wales, 1989.
- Ewer, Peter, Hampson, Ian, Lloyd, Chris, Rainsford, John, Rix, Stephen, & Smith, Meg, *Politics and the Accord*, Pluto Press, Leichhardt, New South Wales, 1991.
- Ewer, Peter, Hampson, Ian, Lloyd, Chris, Rainsford, John, Rix, Stephen & Smith, Meg, *International Best Practice? A Critical Guide*, Pluto Press, Leichhardt, New South Wales, 1993.
- Ewer, Peter, Higgins, Winton & Stevens, Annette, *Unions and the Future of Australian Manufacturing*, Allen and Unwin, Sydney, 1987.
- Forsyth, Peter (ed.), *Microeconomic Reform in Australia*, Allen and Unwin, St Leonards, New South Wales, 1992.
- Galligan, Brian & Singleton, Gwyneth (eds), *Business and Government Under Labor*, Longmann Cheshire, Melbourne, 1991.

- Glezer, Leon, *Tariff Politics: Australian Policy Making: 1960-1980*, Melbourne University Press, Carlton, Victoria, 1982.
- Green, Roy & Genoff, Rodin (eds), *Making the Future Work: Crisis and Change in the South Australian Economy*, Allen and Unwin, St Leonards, New South Wales, 1993.
- Head, Brian W. & Patience, Allan (eds), *From Fraser to Hawke: Australian Public Policy in the 1980s*, Longman Cheshire, Melbourne, 1989.
- Horne, Donald (ed.), *The Trouble With Economic Rationalism*, Scribe Publications, Newham, Victoria, 1992.
- Hughes, Helen, *Achieving Industrialisation in East Asia*, Cambridge University Press, Cambridge, England, 1988.
- Indecs Economics, *State of Play 5 - The Australian Economic Update*, Allen and Unwin, St Leonards, New South Wales, 1988.
- Jaensch, Dean, *The Hawke-Keating Hijack: The ALP in Transition*, Allen and Unwin, Sydney, 1989.
- James, Chris, Jones, Chris & Norton, Andrew (eds), *A Defence of Economic Rationalism*, Allen and Unwin, St Leonards, New South Wales, 1993.
- Jennett, Christine & Stewart, Randal G. (eds.), *Hawke and Australian Public Policy: Consensus and Restructuring*, MacMillan, South Melbourne, Victoria, 1990.
- Johnson, Carol, *The Labor Legacy: Curtin, Chifley, Whitlam, Hawke*, Allen and Unwin, Sydney, 1989.
- Johnson, Chalmers, *MITI and the Japanese Miracle: The Growth of Industrial Policy 1925-1975*, Stanford University Press, Stanford, California, USA, 1982.
- Johnson, Chalmers, Tyson, Laura D'Andrea & Zysman, John (eds), *Politics and Productivity: The Real Story of Why Japan Works*, Ballinger Publishing Company, Cambridge, Massachusetts, USA, 1989.
- Junankar, P.N. & Kapuscinski, Cezary A., *Aboriginal Employment and Unemployment: An Overview - Australian National University Centre for Economic Policy Research Discussion Paper No.255*, Centre for Economic Policy Research, Australian National University, Canberra, 1991.
- Kelly, Paul, *The End of Certainty: The Story of the 1980s*, Allen and Unwin, St Leonards, New South Wales, 1992.
- Kelvin, Peter & Jarrett, Joanna E., *Unemployment: Its Social Psychological Effects*, Cambridge University Press, Cambridge, New York, USA, 1985.
- King, Stephen & Lloyd, Peter (eds), *Economic Rationalism: Dead End or Way Forward?*, Allen and Unwin, St Leonards, New South Wales, 1993.

- Lawrence, Geoffery, *Capitalism and the Countryside: The Rural Crisis in Australia*, Pluto Press, Sydney, 1987.
- Legge, John M., *The Competitive Edge: How Innovation Creates and Sustains the Competitive Advantage of Enterprises*, Allen and Unwin, North Sydney, New South Wales, 1992.
- McEachern, Doug, *Business Mates: The Power and Politics of the Hawke Era*, Prentice Hall, Sydney, 1991.
- McGavin, P.A., Phua, K.K., & Ross, M.A., *The Welfare Implications of the Duration of Unemployment in Australia - Australian National University Centre for Economic Policy Research Discussion Paper No.202*, Australian National University, Canberra, January 1989.
- Metal Trades Unions, *Policy for Industry Development and More Jobs*, Metal Trades Unions, Melbourne, 1984.
- Munnell, A.H. (ed.), *Is There a Shortfall in Public Capital Investment? Reserve Bank of Boston Conference Series No.34*, Reserve Bank of Boston, Boston, Massachusetts, USA, 1990.
- Nevile, J.W., *Fiscal Policy in Australia: Theory and Practice*, 2nd edn, Longman Cheshire, Melbourne, 1975.
- Pusey, Michael, *Economic Rationalism in Canberra: A Nation Building State Changes its Mind*, Cambridge University Press, Cambridge, England, 1991.
- Rees, Stuart, Rodley, Gordon & Stilwell, Frank (eds), *Beyond the Market: Alternatives to Economic Rationalism*, Pluto Press, Leichhardt, New South Wales, 1993.
- Richardson, Graham, *Whatever It Takes*, Bantam, Sydney, 1994.
- Rowan, D.C., *Australian Monetary Policy 1950-1975*, George Allen and Unwin, Sydney, 1980.
- Sheridan, Kyoko (ed.), *The Australian Economy in the Japanese Mirror*, University of Queensland Press, St Lucia, Queensland, 1992.
- Stewart, Jenny, *The Lie of the Level Playing Field: Industry Policy and Australia's Future*, Text Publishing, Melbourne, 1994.
- Stewart, Randall G. & Jennett, Christine (eds), *Hawke and Australian Public Policy*, MacMillan, South Melbourne, Victoria, 1990.
- Stricker, Peter & Sheehan, Peter, *Hidden Unemployment: The Australian Experience*, Institute of Applied Economic and Social Research, University of Melbourne, Melbourne, 1981.
- Thurow, Lester, *Head to Head: Coming Economic Battles Among Japan, Europe, and America*, Morrow, New York, USA, 1992.

- Thurow, Lester, *The Future of Capitalism: How Today's Economic Forces Will Shape Tomorrow's World*, Allen and Unwin, St Leonards, New South Wales, 1997.
- Vintila, Peter, Philimore, John & Newman, Peter (eds), *Markets, Morals and Manifestos: Fightback! and the Politics of Economic Rationalism in the 1990s*, Institute for Science and Technology Policy, Murdoch University, Murdoch, Western Australia, 1992.
- Warhurst, John, *Jobs or Dogma? The Industries Assistance Commission and Australian Politics*, University of Queensland Press, St Lucia, Queensland, 1982.
- W. D. Scott and Co. Pty. Ltd., *A Study of Resource Allocation Strategy in Australia: Report from W.D. Scott & Co. Pty Ltd.*, Associated Chambers of Manufactures of Australia, Canberra, 1975.
- Webb, L.R. & Allan, R.H. (eds), *Industrial Economics: Australian Studies*, George Allen and Unwin, Sydney, 1982.
- Whitlam, Gough, *The Whitlam Government 1972-1975*, Penguin, Ringwood, Victoria, 1985.
- Windshuttle, Keith, *Unemployment: A Social and Political Analysis of the Economic Crisis in Australia*, rev. edn, Penguin Books, Ringwood, Victoria, 1980.

Submissions

- Ararat Regional Development Board, *Submission to the Parliamentary Inquiry Into Tariffs and Industry Development*, Unpublished, 1993.
- Australian Chamber of Manufactures, Bendigo, *Submission to the Independent Inquiry Into Tariffs and Industry Development*, Unpublished, 1992.
- Australian Council of Trade Unions, *ACTU Proposals Re Employment Growth and Industry Development*, Unpublished, 1991.
- Australian Council of Trade Unions, *ACTU Presentation: - Federal Government Meeting on Youth Unemployment: The Carmichael Reform of Vocational Education and Training*, Unpublished, 1992.
- Australian Council of Trade Unions, *ACTU Submission Re Economic Statement*, Unpublished, 1992.
- Australian Gas Light Company, *Submission to the Industry Commission Inquiry 'Impediments to Regional Industry Adjustment'*, Unpublished, 1993.
- Britax Rainsfords Pty. Ltd., *Response to the Industry Commission's Draft Report [on the Automotive Industry]*, Unpublished, 1990.
- Brotherhood of St Laurence, *Submission to the Industry Commission Inquiry Into Tariffs and Industry Development*, Unpublished, 1992.

- Brotherhood of St Laurence, *Impediments to Regional Industry Adjustment: Submission to the Industry Commission*, Unpublished, 1993.
- Buck, James E., *Submission to the Parliamentary Enquiry into Tariffs and Industry Development, Vehicle Builders Employees' Federation of Australia*, Unpublished, 1992.
- Carruthers, Geoff D., *Impediments to Regional Industry Adjustment: Wangaratta Regional Development Corporation*, Victoria, Unpublished, 1993.
- Caucus Task Force, *'Growth Plus' Equals the Employment Challenge: A Positive Agenda for Change - Submission to the Prime Minister's Expert Committee on the Future of Employment and Unemployment*, Unpublished, 1993.
- Chamber of Commerce and Industry South Australia Inc., [*Submission to the Independent Parliamentary Inquiry Into Tariffs and Industry Development*], Unpublished, 1992.
- City of Bendigo and 'Regional Australia Now' Campaign, *Industry Commission Inquiry: Impediments to Regional Industry Adjustment*, Unpublished, 1993.
- City of Maryborough per Peter R Marshall, *Submission to the Parliamentary Inquiry Into Tariffs and Industry Development*, Unpublished, 1992.
- City of Warrnambool, *Industry Commission Inquiry into the Impediments to Regional Industry Adjustment*, Unpublished, n.d.
- City of Warrnambool, *Submission to the Industry Commission Inquiry Into Tariffs and Industry Development*, Unpublished, 1993.
- Cowra Shire Council, *Submission to the Industry Commission: Impediments to Regional Industry Adjustment*, Unpublished, 1993.
- Engineering Employers Association South Australia, *Submission to the Independent Parliamentary Enquiry into Tariffs and Industry Development*, Unpublished, 1992.
- Federal Chamber of Automotive Industries, *Submission to the Industry Commission Draft Report on the Automotive Industry*, Unpublished, 1990.
- General Motors Holden's Automotive, *Second Submission by General Motors Holden's Automotive to the Industry Commission Inquiry into the Automotive Industry: Response to the Draft Report*, Unpublished, 1990.
- Grafton City Council, *Submission to the Industry Commission Enquiry into the 'Impediments to Regional Industry Adjustment'*, Unpublished, 1993.
- Industry Commission, *Submission to the Review of Business Programs*, Unpublished, 1997.
- Kojonup Shire Council, *Submission to the Industry Commission Inquiry Into Impediments to Regional Industry Adjustment*, Unpublished, 1992.

- Legge, John M., *A Submission to the Senate Enquiry into the Efficacy of Tariff Protection*, Unpublished, 1992.
- Lowe, Ian, *Submission to the Parliamentary Inquiry Into Tariffs and Industry Development*, Unpublished, 1992.
- Maryborough & District Development Committee, *Submission of Maryborough & District Development Committee to Industry Commission Inquiry: Impediments to Regional Industry Adjustment*, Unpublished, 1993.
- Mitsubishi Motors Australia Ltd., *Submission to the Parliamentary Inquiry Into Tariffs and Industry Development*, Unpublished, 1992.
- Motor Trades Association of Australia, *Submission by the Motor Trades Association of Australia to the Industry Commission Inquiry Into the Automotive Industry*, Unpublished, 1990.
- Murray Citrus Growers Co-operative Association (Australia) Ltd., *Submission to Industry Commission Inquiry into Horticulture*, Unpublished, 1992.
- Noack, Paul, Vehicle Builders Employees Federation (SA Branch), *Submission to the Parliamentary Enquiry Into Tariffs and Industry Development*, Unpublished, 1992.
- Riverland Development Corporation, [*Submission to the Industry Commission Inquiry Into*] *Impediments to Regional Industry Adjustment: Riverland of South Australia*, Unpublished, 1993.
- South Australian Manufacturing Advisory Council, *Issues in Industry Policy and Prospects for South Australia: Submission to the Independent Parliamentary Inquiry Into Tariffs and Industry Development by the South Australian Manufacturing Advisory Council*, Unpublished, 1992.
- South Australian Manufacturing Advisory Council, *South Australian Industry in the 1990s: A Proposal for Action: Submission to the Commonwealth Government*, Unpublished, 1992.
- Stewart, Malcolm J., *Statement by Mr Malcolm J. Stewart, Director, Federation of Automotive Products Manufacturers to the Parliamentary Inquiry Into Tariffs and Industry Development*, Unpublished, 1992.
- Textile, Clothing and Footwear Council of Australia Limited, *The Australian Democrats Inquiry Into Tariffs: Submission by the Textile Clothing and Footwear Council of Australia Limited*, Unpublished, 1992.
- Toyota Motor Corporation, *Submission to the Industry Commission Inquiry into the Automotive Industry*, Unpublished, 1990.
- United Trades and Labour Council of South Australia, *Parliamentary Inquiry Into Tariffs and Industry Development: Submission*, Unpublished, 1992.

Wangaratta Regional Development Corporation, *Submission to the Federal Regional Development Taskforce*, Unpublished, 1993.

Journals

Abbott, Keith, 'Financial deregulation in retrospect', *Journal of Australian Political Economy*, no.27, November 1991, pp.88-98.

Alesina, Alberto, Gruen, David W. R. & Jones, Matthew T., 'Fiscal adjustment, the real exchange rate and Australia's external imbalance', *The Australian Economic Review*, 3rd Quarter 1991, pp.38-51.

Aschauer, David A., 'Is public expenditure productive?', *Journal of Monetary Economics*, vol.23, no.2, pp.177-200.

Beardow, Margaret, 'Why we can't run on raw materials', *Australian Business*, vol.11, no.19, 6 March 1991, pp.44-45.

Block, Ray, 'The ultimate cargo cult', *Australian Business*, vol.11, no.19, 6 March 1991, pp.40-42.

Botsman, Peter, 'US trade and industry policy: Is Australian trade policy behind the eight ball?', *Evatt Papers*, vol.1, no.1, 1993, pp.32-34.

Castles, Francis G., 'The ten commandments of comparative industry policy analysis', *Australian Quarterly*, vol.62, no.4, Summer 1990, pp.337-345.

Deeley, Michael, 'Government must do its bit', *Australian Business*, vol.11, no.19, 6 March 1991, pp.46-47.

de Ridder, John, 'Cumulative causation versus comparative advantage', *Journal of Australian Political Economy*, no.20, October 1986, pp.44-48.

Dixon, Daryl, 'Unemployment: The economic and social costs', *Current Affairs Bulletin*, vol.65, no.9, February 1989, pp.13-19.

Dunbar, William, 'Today's SBIC: New design, renewed commitment', *Venture Capital Journal*, May 1995, p.6.

Easterly, William & Rebelo, Sergio, 'Fiscal policy and economic growth: An empirical investigation', *Journal of Monetary Economics*, vol.32, 1993, pp.417-458.

Gelber, Frank, 'Manufacturing in decline', *Australian Business*, vol.11, no.19, 6 March 1991, pp.40-42.

Gramlich, Edward M., 'Infrastructure investment: A review essay', *Journal of Economic Literature*, vol.32, no.3, September 1994, pp.1176-1196.

Hill, Hal, 'The Garnaut report and its critics', *Asian Studies Review*, vol.13, no.3, April 1990, pp.55-57.

- Junankar, P.N. & Kapuscinski, Cezary A., 'The incidence of long term unemployment in Australia', *Australian Bulletin of Labour*, vol.17, no.4, December 1991, pp.325-352.
- Juddery, Bruce, 'Free trade the winner as tariffs are cut', *Australian Business*, vol.11, no.21, 20 March 1991, pp.22-23.
- Juddery, Bruce, 'Howe faction set to dominate policy', *Australian Business*, vol.11, no.21, 20 March 1991, p.25.
- Leaver, Richard, 'The Garnaut report: The quality of realism', *Australian Journal of International Affairs*, vol.44, no.1, April 1990, pp.21-27.
- Lim, David, 'The Garnaut report: An overview', *Asian Studies Review*, vol.13, no.3, April 1990, pp.49-54.
- MacKenzie, Angus, 'Export or die - that's the car plan', *Australian Business*, vol.11, no.21, 20 March 1991, p.24.
- Otto, Glenn & Voss, Graham M., 'Public capital and private sector productivity', *The Economic Record*, vol.70, no.209, pp.121-132.
- Price, R.A., 'The effect of the Government's economic policies on industry, 1973-1975', *The Australian Quarterly*, vol.48, no.2, June 1976, pp.81-94.
- Quiggin, John, 'The Industry Commission approach to public sector reform', *Evatt Papers*, vol.1, no.1, 1993, pp.63-99.
- Rimmer, Malcolm, 'The Garnaut report: Social and industrial relations implications', *Asian Studies Review*, vol.13, no.3, April 1990, pp.57-61.
- Spiers, Rowley, 'Labor and the long termers', *Australian Society*, April 1991, p.27.
- Theophanous, Andrew, 'The re-industrialisation of Australia: Some suggestions for government policy', *Journal of Australian Political Economy*, no.20, October 1986, pp.18-28.
- Tisdell, Clem, 'Key Australian export prospects to East Asia: Primary commodities, tourism and education as perceived by the Garnaut report', *Asian Studies Review*, vol.13, no.3, April 1990, pp.61-68.
- Vipond, Joan, Bradbury, Bruce & Encel, Diana, Social Welfare Research Centre, 'Unemployment and poverty: measures of association', *Australian Bulletin of Labour*, vol.13, no.3, June 1987, pp.179-192.
- Wade, Robert, 'East Asia's economic success: conflicting perspectives, partial insights, shaky evidence', *World Politics*, no.44, January 1992, pp.270-320.
- Webber, Michael, 'Garnaut: The implications of Northeast Asia for Australian industry', *Australian Journal of International Affairs*, vol.44, no.1, April 1990, pp.39-45.

Whiteside, N., 'Social consequences of unemployment: The question of health', *Bulletin of Labour Market Research*, no.16, 1985, p.10.

Speeches

Cook, Peter, Minister for Industry, Science and Technology, *Putting Ideas to Work for Australia - Address to the Industry Launch of the Innovation Package at the Regent Hotel, Melbourne, 7 December 1995*, Unpublished, 1995.

Iddles, N. B., *Automotive Manufacturing Industry Post-1992: Gearing Up for Change: Speech to The Society of Automotive Engineers (Australasia), Wednesday May 1st, 1991*, Unpublished, 1991.

Keating, Paul, *Australian Labor Party Policy Speech: 1993 Federal Election*, Bankstown, 24 February 1993, Unpublished, 1993.

Keating, Paul, *Speech by the Prime Minister, The Hon P. J. Keating MP, The National Trade and Outlook Conference, Melbourne, 6 December 1995*, Unpublished, 1995.

Conference/Seminar Papers

Disney, Julian, *Some Priorities for National Development - A Paper Prepared for the Conference on Social Justice organised by the ACT Council of Social Service, Canberra, 2nd April 1993*, Unpublished, 1993.

Fitzgerald, V. W., *Reform of Australia's Tax System: Integrating the Agenda - A Paper presented at the National Tax Reform Summit: Correcting the Balance at the National Press Club in Canberra, 3-5 October 1996*, Unpublished, 1996.

Genoff, Rodin, *Industry Policy and Sectoral Plans Under Labor - A University of Adelaide Research Seminar Paper, 3 August 1992*, Unpublished, 1992.

Pusey, Michael, *Reclaiming the Middle Ground...from New Right Economic Rationalism - A Paper Presented at The University of Melbourne, Monday/Tuesday, 15 & 16 February 1993 to a Conference on Economic Rationalism? Economic Policies for the 1990s*, Unpublished, 1993.

Regional Policies: Future Directions: Papers Presented at the Office of EPAC Seminar, March 1990, Australian Government Publishing Service, Canberra, 1990.

Booklets

Affirmative Action Agency, *A Practical Guide to Affirmative Action*, Affirmative Action Agency, Sydney, n.d.

Labour Research Centre, *Workplace Reform in Seven Easy Steps: Restructuring Booklet Number 2*, Pluto Press in association with the Labour Research Centre, Sydney, 1991.

Pamphlets

AusIndustry, *Business Networks Program*, Department of Industry, Science and Tourism, Canberra, 1997.

Austrade, *An Outline of the Export Market Development Grants Scheme*, Austrade, Sydney, 1996.

State Government of Victoria, *What is Investment Ready? How to Finance Company Growth*, Business Victoria, Melbourne, 1997.

Newspapers

Clark, David 'Economic rationalism in Australia', *The Australian Financial Review*, 20 September 1995, p.32,33.

Cribb, Julian, 'Farewell to the heartland', *The Australian Magazine*, 12-13 February 1994, pp.10-16.

Davidson, Kenneth, 'Why the books are being made to look worse than they are', *The Age*, 8 September 1993, p.18.

Dawkins, John, 'Conspiracy theories just a mine of misinformation', *The Australian*, 22 May 1992, p.19.

Doman, Matthew, 'Spectre of "jobless recovery"', *The Australian Financial Review*, 1 September 1993, p.19.

Dusevic, Tom, 'Accelerate tariff cuts: Scales', *The Weekend Australian*, 26-27 September 1992, p.4.

Dusevic, Tom, 'New underclass emerges as rich rake it in', *The Australian*, 27 May 1994, p.2.

Falvey, Chris, 'All FAC airports to be sold', *The Australian*, 5 May 1995, p.17.

Green, Shane, 'ACTU backs tough company tax rules in \$1bn. jobs plan', *The Australian*, 16 July 1992, p.1,2.

Green, Shane, 'Keating sets reform agenda for decade', *The Australian*, 22 April 1993 p.14.

Greenlees, Don, 'We never got credit we deserved: PM', *The Weekend Australian*, 6-7 August 1992, p.4.

Hammerton, Ron, 'Hands off car plan, says Nissan', *The Australian*, 10 September 1992, p.13.

Handberg, Allan, 'Strategy lacks focus on growth', *The Australian*, 5 May 1994, p.25.

- 'Is it possible we are within reach of a new era of prosperity' - [an edited text of Paul Keating's speech to the Institute of Public Directors, Melbourne 21 April 1993], *The Australian*, 22 April 1993, p.4.
- Jennings, Bob, 'Car companies set to accelerate SA economy', *The Advertiser*, 10 February 1994, p.13.
- Jones, Evan, 'Laissez-faire and the "pure" market are eternal fictions', *The Australian Financial Review*, 20 July 1994, p.18.
- Kerin, John, 'Recession not the only cause of job losses: Button', *The Advertiser*, 12 May 1992, p.7.
- Kerin, John, 'Cash bid to ease tariff pain', *The Advertiser*, 20 October 1992, p.10.
- Kerr, Sheryl-Lee, 'Recession link as child abuse soars', *The Advertiser*, 6 May 1993, p.3.
- Lynch, Michael, 'How the car plan took the right road', *The Australian Financial Review*, 10 February 1994, p.14.
- Matthews, Trevor & Ravenhill, John, 'Unilateralism not the answer', *The Australian Financial Review*, 25 June 1990, p.12.
- McQueen, Humphrey, 'Tariffs are no panacea', *The Weekend Australian*, 13-14 June 1992, p.24.
- Meredith, Helen & Lewis, Steve, 'Lee flags end to Telecom oligopoly', *The Australian Financial Review*, 4 May 1994, p.3.
- Milne, Glenn, 'Tariff about-face no protection for Paul', *The Australian*, 27 March 1992, p.11.
- Milne, Glenn, 'Protection rackets', *The Weekend Australian*, 19-20 September 1992, p.21.
- Milne, Glenn, Tingle, Laura & Duncan, Tim, 'Toyota boss backs PM', *The Australian*, 24 September 1992, p.1,2.
- Montgomery, Bruce, 'COAG agrees on Hilmer reforms', *The Weekend Australian*, 26-27 February 1994, p.4.
- Olney, Lindsay, 'Labor revs up its push on car tariffs', *The Advertiser*, 3 September 1992, p.19.
- Raethel, Stephanie, '2m hit by poverty in Australia', *The Advertiser*, 4 February 1994, p.2.
- 'Research collaboration the key', *The Australian*, 9 June 1992, p.9.
- Roberts, Peter, 'Developing industry policy', *The Australian Financial Review*, 24 August 1994, p.25.

- Ruthven, Phil, 'White paper draws a costly blank on jobs', *The Australian Financial Review*, 5 May 1994, p.A6.
- Stevens, Tim, 'The pandora's box of protectionism', *The Weekend Australian*, 25-26 April 1992, p.20.
- Stewart, Jenny, 'Still the need to overcome inertia', *The Weekend Australian*, 5 May 1994, p.16.
- Taylor, Lenore & Duncan, Tim, 'Hewson gives way on used cars', *The Australian*, 25 September 1992, p.1,2.
- Tingle, Laura, 'Micro reform, macro misery: The jobs that are gone forever', *The Weekend Australian*, 15-16 June 1991, p.25,26.
- Tingle, Laura, 'Labor divided on tariffs', *The Australian*, 17 July 1992, p.1.
- Tingle, Laura, '60,000 jobs could go under Libs: Ford', *The Weekend Australian*, 19-20 September 1992, p.1,6.
- Tingle, Laura, 'PM, Ministers considered stopping tariff cuts', *The Australian*, 20 October 1992, p.1,2.
- Tingle, Laura, 'PM, States in deal to carve up monopolies', *The Weekend Australian*, 26-27 February 1994, p.1.
- Toohey, Brian, 'Chronicle of a decade that changed us all', *The Sunday Age*, 27 December 1992, Agenda 9.
- Wood, Alan, 'Back from the brink with a vision of reform', *The Australian*, 22 April 1993, p.14.
- Wood, Alan, 'Less change, more reform', *The Weekend Australian*, 22-23 May 1993, p.18.
- Wood, Alan, 'Creative financing of old ideas', *The Australian*, 7 December 1995, p.1.

Magazines

- O'Reilly, David, 'Keating's main chance', *The Bulletin*, 14 April, pp.20-23.
- Rosevear, Sam, 'Best practice and enterprise bargaining: Your edge to competitive advantage', *Benchmark: The Magazine of Workplace Reform*, no.12, August 1995, pp.6-7.

Internet Sources

United States Small Business Administration Homepage as at 28 January 1998.

Small Business Investment Corporations at
<http://www.envista.com/nasbic/SBICs.html>.

Media Releases

Spindler, Sid, 'Tariff report released in Parliament' - *Media Release 93/241*, 26 May 1993.

Television

'An interview with Paul Keating' - *Lateline* - Aired on ABC-TV at 10.30-11.05pm, 22 June 1994.

'Export or die' - *Lateline* - Aired on ABC-TV, 10.30-11.05pm, 21 April 1994.

Keating, Paul - Interviewed on *Meet the Press* - Aired on Channel 10, 10.50-11.20am on 25 October 1992.

Keating, Paul, *Speech at the National Press Club* - Aired on ABC-TV, 1-2pm, 9 February 1993.

Keating, Paul, *Speech at the National Press Club* - Aired on ABC-TV, 1-2pm, 11 March 1993.

'Taking power' - The first episode of *Labor in Power* - Aired on ABC-TV, 9.30-10.30pm, 8 June 1993.

'The great car debate' - *Lateline* - Aired on ABC-TV, 10.30-11.05pm, 4 March 1993.

'The rust belt' - *Lateline* - Aired on ABC-TV, 10.30-11.05pm, 20 July 1992.

'The sweetest victory of all' - The final episode of *Labor in Power* - Aired on ABC-TV 9.30-10.30pm, 5 July 1993.

'Zero 2000' - *Lateline*, ABC TV - Aired 10.30 to 11.05pm, 5 May 1992.

Other Sources

City of Ararat, [Their notes for] Meeting between City of Ararat, Ararat Regional Development Board, Packard CTA Pty Ltd and Senator the Hon. John Button, Minister for Industry, Technology and Commerce, 10 June 1992.

Grosfeld, Sigvald, *Seminar on the TEFT Program*, Held at the Department of Industry, Science and Tourism, 2.30-3.30pm on 9 July 1997.