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INVESTMENT IN AUSTRALIAN MANUFACTURING

Report by the House of Representatives
Standing Committee on Industry,
Science and Technology

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TERMS OF REFERENCE OF THE COMMITTEE

On 24 September 1987 the Standing Committee on Industry, Science and Technology was appointed by resolution of the House of Representatives with power to inquire into and report on any matters referred to it by either the House or a Minister including any pre-legislation proposal, bill, motion, petition, vote or expenditure, other financial matter, report or paper.

TERMS OF REFERENCE OF THE INQUIRY

On 7 December 1987, the Minister for Industry, Technology and Commerce requested the committee to investigate:

1. factors determining the level of investment in the Australian manufacturing industry;

2. policies with potential to improve the Australian manufacturing investment performance.

MEMBERSHIP OF THE COMMITTEE

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
ACM	Australian Chamber of Manufactures
ACTU	Australian Council of Trade Unions
AIDC	Australian Industry Development Corporation
AIRDIS (Scheme)	Australian Industrial Research and Development Incentives Scheme
AMC	Australian Manufacturing Council
AMIC	Australian Mining Industry Council
ASTEC	Australian Science and Technology Council
BCA	Business Council of Australia
BIE	Bureau of Industry Economics
CAI	Confederation of Australian Industry
CEDA	Committee for Economic Development of Australia
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DITAC	Department of Industry, Technology and Commerce
GDP	Gross Domestic Product
GIRD (Scheme)	Grants for Industry Research and Development Scheme
IRDB	Industry Research and Development Board
MIC (Program)	Management and Investment Companies Program
MICLB	Management and Investment Companies Licensing Board
MTIA	Metal Trades Industry Association
NIEIR	National Institute of Economic and Industry Research
OECD	Organisation for Economic Co-operation and Development
R&D	research and development

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APPENDICES

RECOMMENDATIONS

The committee recommends that:

1. the Government request the Department of Industry, Technology and Commerce; the Treasury; the Bureau of Industry Economics; and other relevant bodies to review investment measurement techniques with a view to improving their effectiveness and minimising areas of inadequacy, conflict and uncertainty. (paragraph 2.10)

2. the task force, established by the Government to investigate education and skills training reform, also report on alternative forms of industry training funds which might be established so that, if appropriate levels of funding are not reached within 12 months of the task force report being presented to the Government, further action might be taken to achieve those levels. (paragraph 4.27).

3. the above task force specifically examine the apprenticeship system and its reform. (paragraph 4.27).

4. the tax incentive scheme for R & D expenditure not be further altered for at least five years from 1 July 1991 to ensure stability and predictability for business in making its investment plans. (paragraph 4.43)

5. all possible means of reforming the tax system to remove or minimise the distorting effect of inflation be fully investigated. (paragraph 5.41)

6. a limited exemption from capital gains tax for a fixed time period be introduced for venture capital investment. (paragraph 5.45)

7. the development of the venture capital market be reviewed again in 1990-91 before the termination of the Management and Investment Companies Program. (paragraph 5.46)

8. the Government hold a public inquiry into the adequacy of the Australian financial system and its institutions in serving the needs of industry development and restructuring. This should include an assessment of the impact of financial de-regulation and subsequent new entry into the banking and financial sectors. (paragraph 5.47)

9. recognising the existence of public concern on speculative investment, the Treasurer have the question of tax deductability in relation to share purchases examined to see whether the proposals in paragraph 5.50 are practicable. (paragraph 5.51)

10. the Government take steps to strengthen the Australian Industry Development Corporation so that it can make an effective contribution to industry restructuring, including ensuring that it has a sufficiently strong capital base to participate in comparatively risky equity investments. (paragraph 5.53)

MAJOR FINDINGS AND CONCLUSIONS

- Investment in the conventional sense refers to the acquisition of physical capital and inventories. There are problems in its measurement and reasons for exercising some caution in drawing conclusions from the data. Other forms of investment - such as expenditure on marketing, skills training, research and development, and computer software - are becoming increasingly important in terms of productivity, production and profitability. Expenditure on such forms of investment could be better identified than at present. (paragraph 2.30)

- The growth rate of conventional investment in manufacturing in the 1970s and the first half of the 1980s was considerably less than it had been in the 1950s and 1960s. That reflected a significant decline in the role of manufacturing in the Australian economy. (paragraph 2.31)

- Investment levels in manufacturing picked up subsequent to the substantial depreciation of the $A in 1985. There has also been encouraging growth in exports of manufactured products since then. Australia has been less successful in terms of import substitution, although subdued domestic demand appears to be keeping down the level of manufactured imports. (paragraph 2.32)

- It is still too early and the situation too potentially volatile for complacency about investment performance or improvements in the trade of manufactured goods. (paragraph 2.33)

- There is some difficulty in saying which of the positive or negative influences on investment have a greater effect than others in practice. There is a wide range of factors involved, many of which interact with each other. (paragraph 3.5)

- Matters which were mentioned in evidence as being of particular importance among the possible influences were the level of demand; capacity utilisation; the expected rate of return; the availability and cost of capital, and, therefore, interest rates; replacement of labour by capital; and business confidence or uncertainty and therefore risk premiums. (paragraph 3.6)

- There was some disagreement whether the rising levels of capacity utilisation have reached a stage where production will have difficulty meeting demand, and where increased investment is now required. There has been quite a wide diversity in the fortunes of the various industries within the manufacturing sector - in terms of their growth in production and investment. (paragraph 3.19)

- Corporate borrowings increased substantially in the 1980s - initially in the expectation of good economic growth and then owing to the decline in cash flow during the 1982-83 recession. Debt financing increased in comparison to equity financing of investment during the same period. Interest repayments have therefore assumed a much greater share of the cash flow of businesses. The increase in corporate borrowings from overseas sources left companies vulnerable to exchange rate changes. The $A devaluation added to the impact of high interest rates. (paragraph 3.37)

- Quite apart from the cost of debt finance there is the question of the availability of funds. Small businesses, particularly those seeking to undertake new ventures, can find it difficult to offer sufficient security to obtain the finances they require. The financial sector looks for returns on investment which would allow debt repayment on a time scale which is often too short. (paragraph 3.38)

- Investors are reportedly greatly frustrated by the time delays and complexity of the process of gaining approvals from many Government Departments and from the various layers of government - local, State and Federal. (paragraph 3.42)

- The high cost of fixed capital assets, particularly following the $A depreciation, discourages investment in manufacturing. The significance of this factor is increased by the high percentage of Australia's capital equipment needs being met from imports. (paragraph 3.43)

- A high inflation rate and fluctuations in the exchange rate are further disincentives to investment. Australia's inflation rate has been gradually falling but is still above that of our major OECD trading partners. Our inflation rate leads to increases in nominal interest rates and generally lowers business confidence. A fluctuating exchange rate similarly leads to uncertainty about the net returns to investment. (paragraph 3.46)

- The importance of investment in skills training and in R&D is greater than a simple measure of their share of total investment would indicate. Research and development expenditure reflects a desire to be innovative in both products and processes. Investment in skills training is an essential extension of investment in physical capital and R&D. Unless the skills of Australia's working population are maintained and extended, the ability to make use of the latest technology in physical plant and equipment will be severely hampered and Australia will be unable to compete with more efficient and skilled nations. Also, recurrent education will be increasingly necessary as rapid technological change and industry restructuring demands a more flexible workforce. (paragraph 4.2)

- Most witnesses considered the current level of investment in skills training to be inadequate. The committee was told that shortages of skilled labour are being experienced throughout manufacturing industry. (paragraph 4.3)

- Investment in training is a long term investment and long term investments are unpopular with financial managers looking for quick returns. There is also the 'free-rider' problem with firms being reluctant to spend money training staff who may then be 'poached' by another employer who has not had to contribute to their training but reaps the return. (paragraph 4.18)

- In the same way as training costs are cut in difficult times, one of the problems with the apprenticeship system has been that expenditure has been a cost cut during difficult macro-economic conditions. Accreditation of training from one trade to another or wider training applicable to a whole industry are matters which warrant further examination. Adult training and retraining are often neglected and little attention is paid to the upgrading and updating of labour force skills. The committee considers that the current apprenticeship scheme is too age-related. It is essential that alternatives to the current scheme be examined. (paragraph 4.19)

- Co-operation between unions and management in developing a better organisation of work is essential. Development of more satisfying career paths with access to continuing education and skills upgrading, and enhancement of job satisfaction which multi-skilling can provide will improve industrial relations and help retain skilled workers within industry. (paragraph 4.26)

- While recognising industry's low level of contribution to skills training, the committee was not able to determine on

the evidence presented the reasons for this. It may be owing to lack of incentives, the perceived high levels of youth wages or attitudinal problems. A process of negotiation, such as has been carried out in the metal trades industry, is the preferred approach to improve the level of training, increase industry funding and restructure jobs. The committee supports the establishment of a task force by the Government to investigate education and skills training reform. The committee proposes to reconsider investment in education and skills training when the report of the task force has been completed. (paragraph 4.27)

. Australia's gross expenditure on R&D as a percentage of gross domestic product (GDP) was below that of the United States, Japan, West Germany, Sweden, the UK, France and the OECD average throughout the 1970-1983 period. Furthermore, the ratio of R&D expenditure to more traditional capital investment was far lower in Australia than in any of the above countries for most of the same time period and the divergence generally increasing. The low level of our national R&D expenditure resulted from the very small contribution in international terms of the Australian business enterprise sector. (paragraphs 4.32 and 4.33)

. Expenditure in 1981 on R&D as a percentage of production in the Australian manufacturing sector compared quite badly with the corresponding figures in the USA, Japan, Germany, the United Kingdom, France, Sweden, Canada and Italy. This was true in the high, medium and low technology areas and for almost all of the individual industries within each of those areas. Even with the improvement in R&D expenditure in 1984-85 Australia still compared badly in most manufacturing industries with the 1981 OECD median level. (paragraph 4.38)

. Surveys conducted in 1982 and 1984 revealed a problem in the attitudes of Australian business management. The fact that

Australia's industries were technologically behind those of its competitors was recognised but the apparent reaction was one of complacency. (paragraph 4.39)

. The level of business investment in R&D has risen in recent years from an extremely low base. This has clearly been encouraged by the generous 150 per cent tax incentive scheme. It is still too early to tell whether business leaders are coming to realise the benefits that might flow from R&D expenditure quite apart from tax concessions. There does appear to be an attitudinal problem which could be deeply entrenched. (paragraph 4.43)

. There was general agreement that government policies needed to be predictable and stable over a long period. They should be clearly communicated, preferably after consultation with groups which might be affected. These would minimise one area of uncertainty within the business community and be conducive to investment. (paragraph 5.3)

. The value of the currency should ultimately reflect the fundamental health of the economy as assessed by the market place. In practice, however, the market evaluation can be fairly volatile and depend on movements in the value of currencies internationally more significant than our own. Some limited intervention in the market by the Reserve Bank is therefore justified from time to time to increase stability. The limits of that intervention can not usefully be prescribed as a result of this inquiry. (paragraph 5.9)

. The committee's concern is whether continuous cuts in government expenditure are warranted by any possible increase that might result in manufacturing investment. The committee does not consider that that single ground is sufficient to justify a process of further fiscal contraction. (paragraph 5.13)

- Any manipulation of the money supply growth must be based on a very careful analysis of the growth rate of the economy. The possible stimulatory effects on domestic demand are very significant in our present economic position. The committee, therefore, does not advocate the use of monetary policy in isolation to lower interest rates. The impact of fiscal restraint must be closely monitored to see what scope exists to lower interest rates. For the longer term, the lowering of inflationary expectations should help bring down interest rates in a more sustainable manner. (paragraph 5.17)

- It is clearly important that the Government keep in mind the need to further reduce our inflation rate. The principal task must be to ensure that there is no explosion in wages. This can only be achieved through continuing negotiations between the union movement, industry and the government based on an understanding of the national importance of dampening down the inflation cycle. (paragraphs 5.18 and 5.20)

- There is too often a need for businesses to approach a large number of different departments to obtain approvals for different aspects of one proposed undertaking. There appears to be good reason to suspect that the existence of extensive regulation requirements not only disrupts business activity but reduces the level of investment. Many measures are being examined by the Commonwealth and State Governments and the committee urges that this review process be given a high priority. (paragraph 5.23 and 5.25)

- Apart from the need to be internationally competitive in the tax burden imposed on business there is the need to remove many of the biases within our tax system which favour certain kinds of activities over others. Substantial differences appear to exist between the effective tax rates applying to the returns on investment in machinery, buildings and inventories. Owing to the differences between the types of

assets in which investments are chiefly made and the different forms of finance used, there are resulting biases in the tax system between different industries. (paragraphs 5.32 and 5.33)

- The reduction in the company tax rate from 49 to 39 per cent and the changes in the accelerated depreciation allowance, announced in the May 1988 Economic Statement will help decrease the distortions which previously existed in the tax system. However, this package of changes will raise the user cost of capital applying to plant and equipment. Assuming firms use conventional forms of financial calculation, this would reduce the incentive to invest, particularly in sectors where equipment has a long economic life such as manufacturing and mining. (paragraph 5.39)

- Australian investment abroad is essential if Australia is to gain better access to overseas markets. The danger in such a development is that investors will seek tax havens offshore to the detriment of investment in Australia. (paragraph 5.55)

- The committee does not favour the re-introduction of a general investment allowance. The provision of particular investment incentives should only be provided if at all, after detailed study on an industry by industry basis and then only if necessary to overcome the effects of some specific market failure. Their impact on the economy as a whole should also be taken into account. In any case, investment incentives should have a clearly understood, fixed application period. (paragraph 5.59)

- More could be done to monitor and advise Australian companies about opportunities such as tenders being called for projects which Australian companies could undertake either singly or through a consortium. Many smaller companies do not have the capabilities to gather data about industry developments or

growth opportunities particularly in the export area. There may be scope for a sharing of information at a national level through State co-operation. (paragraphs 5.60 and 5.61)

- Commonwealth and State co-operation in government purchasing could also assist Australian industry. Longer term tendering arrangements in government purchases would provide more certainty for local producers and make them more able to compete against overseas suppliers. (paragraph 5.62)

CHAPTER 1

INTRODUCTION

1.1 This inquiry has been undertaken at a time of crucial importance for the future of the Australian economy and for the living standards of all Australians. Australia has a massive external debt problem reflecting many years of a serious imbalance between exports and imports and large external borrowings aggravated by adverse exchange rate movements. Australia's share of world trade has been declining for some decades. Australia's exports are predominantly raw materials or low value-added products while the growth areas in world trade are elaborately transformed manufactures and services. Australia's dependence on primary exports therefore means it is particularly vulnerable to fluctuations in rural and mineral export prices.

1.2 The decline of the contribution of the manufacturing sector to Gross Domestic Product (GDP) in Australia, especially since the 1960s, is well documented. The manufacturing sector has focused very largely on the domestic market, seriously underachieving as an earner of export income. At the same time import penetration of the domestic market for manufactured goods increased substantially between the mid-1970s and the mid-1980s.[1]

1.3 Some commentators see a move out of manufacturing and into services and high technology activities as a natural and desirable process in the development of a post-industrial economy. However, such analyses fail to take account of the close linkages between manufacturing and many of these activities. The loss of manufacturing would also mean the loss of a range of associated service activities which serve as inputs.

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1. Australian Manufacturing Council Annual Report 1985-86, p.74.

1.4 If Australia is to overcome its external debt problems it must improve its competitiveness in order to correct the trade imbalance. A resurgence of manufacturing industry, particularly in the import substitution and export areas, in addition to increasing primary exports, is essential to achieve that aim.[2] A number of factors have been involved in the decline of Australian manufacturing and a number of matters need to be addressed if the decline is to be reversed, but it would appear unavoidable that industry restructuring, upgrading plant and buildings or establishing new industries must involve a substantial level of new investment.

1.5 It was against that background that the committee commenced this inquiry into the factors which promote or inhibit investment in manufacturing industries and what policies the Government might consider to improve the levels of manufacturing investment. Thirty-five submissions and supplementary submissions were received and public hearings were held in Melbourne and Canberra on 8, 9 and 18 March 1988. On 25 May 1988 the Treasurer announced in an Economic Statement to the Parliament a number of measures which can be expected to have a significant impact on the manufacturing sector. This report takes those measures into account.

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2. Department of Industry, Technology and Commerce: *Australian Industry New Directions*, AGPS 1987, p.7.

CHAPTER 2

DEFINITION OF INVESTMENT AND ADEQUACY OF CURRENT INVESTMENT LEVELS

A. Definition and measurement

2.1 Investment conventionally means 'the acquisition of physical capital (plant and equipment and buildings and structures) and inventories'.[1] The Australian Bureau of Statistics (ABS) produces publications containing figures on private new capital expenditure and, in the Australian National Accounts, estimates of the capital stock which allow investment in this conventional sense to be measured. The basis on which the statistics in the various publications are compiled differs in certain respects, requiring caution in making comparisons.

2.2 Various industry organisations carry out surveys of their own, which again may produce differences in results. For example, the Metal Trades Industry Association (MTIA) figures of September and November 1987 indicated higher expected levels of investment than the ABS figures. Actual investment, according to the MTIA, has been closer to their predictions.[2]

2.3 The Bureau of Industry Economics (BIE) submission examined a number of problems it saw with the measurement of capital stock and investment. These are summarised here:

- The calculation of the capital stock depends on assumptions about: (a) the rate at which capital loses its productive capacity (the economic depreciation rate) and (b) the productive capacity of new capital items, which is a reflection of the technology embodied in them. There is also an assumption that the depreciation rate and the level of technology remain stable for

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1. Evidence, p.789.
2. Evidence, p.689.

long periods. If those assumptions are incorrect then substantial errors can arise.

- 'Economic depreciation rates vary widely across different assets and industries ... the longer the asset life the slower the apparent accumulation of the capital stock.'

- The rate of economic depreciation of capital goods can vary up or down depending on: technological developments (leading to obsolescence or perhaps extending useful life); changes in the price of complementary inputs or replacement goods; changes to operating procedures; or new repair and maintenance methods.

- 'The Australian Bureau of Statistics have made no adjustment to their capital stock series for changes in the quality of new capital goods, although they have shown that the impact of such adjustment can be substantial.' Less capital may now be required for a given level of output.

- The exclusion, by the ABS, of 'expenditure on domestically sourced second hand equipment' from its new capital expenditure figures 'fails to take into account any improved productive capacity which may result from such a transaction'.[3]

2.4 It is important to mention as well that, while investment in manufacturing in an aggregate sense may exhibit certain trends and enable us to draw certain broad conclusions, the different sectors within manufacturing exhibit trends of their own - both in terms of output and investment levels - which may be quite contrary to the aggregate picture. Similarly, investment in plant and equipment does not necessarily occur simultaneously with investment in buildings and structures; indeed, the statistics indicate that in practice the growth rate

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3. Evidence, pp.812-814.

patterns with these two kinds of fixed capital expenditure can be quite dissimilar.

2.5 The Australian Manufacturing Council (AMC), in commenting on the best measure of investment performance, pointed out that changes in industrial structure over time and differences in structure between countries can make comparisons of aggregated data questionable.[4] The AMC contrasted the substantial capital to output ratios of the raw materials processing industries, which received much of the high plant and equipment investment of the early 1980s, with the lower capital to output requirements of high technology product industries towards which world demand has shifted.[5] The BIE made a similar comment about the effect of structural change.[6]

2.6 The AMC also argued that comparison with Australia's competitors present efforts, on an industry by industry basis, is a more useful measure of the adequacy of Australian investment performance than comparisons with Australia's past levels of investment, if we are looking at the chances of improving the trading position. The OECD has published national accounts data from its member countries which indicate gross fixed capital formation by industry sector but the committee is not aware of any detailed study or comparison of those industry investment trends. In any case, the AMC mentioned that getting 'reliable and specific data, on an industry sector basis' even for Australia was a difficult exercise, so international comparisons would be even more suspect.[7]

2.7 In addition to physical capital investment, as a number of witnesses and submissions pointed out, 'so called 'intangible' investment in computer software, research and development (R&D) and skill formation, through formal and informal training' has become increasingly important.[8] The lack of skilled labour was

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4. Evidence, p.592.
5. Ibid.
6. Evidence, p.820.
7. Evidence, pp.626 & 627.
8. Evidence, p.789.

repeatedly mentioned as an impediment to manufacturing growth and to investment. The MTIA, whose member companies comprise an estimated 42 per cent of the manufacturing sector, stated that such shortages were a particular problem in their area which had to be addressed.[9]

2.8 As the BIE stated, expenditures on 'intangible' investments are, to an extent, hidden 'because they are normally accounted for as part of a firm's operating expenses and, therefore, are not captured in estimates of capital expenditure as defined in the Australian Bureau of Statistics' surveys'.[10] Not only may such investment be hidden but it may slightly lower the requirement for expenditure on physical capital, for example by increasing the quality of output (and the price) without increasing the volume.[11]

2.9 While the committee's inquiry mainly concentrated on investment in the narrower, more conventional sense, the committee acknowledges the inescapable importance of the 'intangible' investment areas. Unfortunately, data on such intangible investment, particularly training, does not appear to be collected with the same reliability as does physical investment data. We have specifically looked at investment in skills and in research and development in Chapter 4.

2.10 Given the apparent deficiencies in the measurement of investment, the Committee recommends

> **that the Government request the Department of Industry, Technology and Commerce; Treasury; the Bureau of Industry Economics; and other relevant bodies to review investment measurement techniques with a view to improving their effectiveness and minimising areas of inadequacy, conflict and uncertainty.**

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9. Evidence, pp.657-665.
10. Evidence, p.819.
11. Evidence, pp.819 & 820.

B. Adequacy of investment performance - Pre-1985

2.11 The terms of reference of the inquiry carry the implication that there is a problem with the level of investment in Australia's manufacturing sector. Chapter 1 briefly outlines the reasons for this concern. To recover from current account and external debt problems Australia needs to expand exports of manufactured goods, particularly elaborately transformed manufactures, and compete more successfully against imports of manufactured goods. There is a need to reverse the decline in the manufacturing sector which has been taking place for some time.

2.12 The Australian Manufacturing Council's (AMC) Annual *Report for 1984-85 stated:*

> While manufacturing has a potential role to play in redressing the growing weaknesses in our external sector, in recent years growth in manufacturing has lagged behind that of the rest of the economy. The sector's relative shares of GDP and employment have declined.
>
> Between 1969-70 and 1983-84 Australia's GDP grew in real terms by 2.9% per annum ....
>
> By comparison:
>
> . Manufacturing output grew in real terms by 1.3%. As a result the sector's share of GDP declined from 22% to 16.8%.[12]

2.13 The 1987 BIE publication *Investment in the Manufacturing Sector 1959-60 to 1984-85* pointed out the decline in the growth of manufacturing investment during the 1970s, compared with the 1950s and 1960s. The trend rate of growth in manufacturing capital stock was 5.9 per cent between 1954-55 and 1960-61, and 6.1 per cent between 1960-61 and 1970-71. It fell to 0.8 per cent in the 1970s. The rate improved in the first half of the 1980s but only to 2.4 per cent between 1980-81 and 1983-84.[13]

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12. AMC Annual Report, 1984-85, p.47.
13. Bureau of Industry Economics: *Investment in the Manufacturing Sector 1959-60 to 1984-85* Occasional Paper 3, AGPS 1987, pp.4 & 5.

> In 1984-85 and early in 1985-86 there were signs of a recovery in investment, but recently this has fallen off again and particularly so in equipment.[14]

2.14 The decline in the rate of manufacturing investment did not simply reflect a slump in the level of total investment. Again quoting the BIE:

> Until the mid sixties, manufacturing accounted for more than 40 per cent of non-farm private gross fixed capital expenditure. For some years in the early fifties it accounted for more than 50%. Since the mid sixties manufacturing's share has declined so that it now represents only about one fifth of private gross fixed capital expenditure.[15]

It is true, of course, that these changing proportions resulted partly from the expansion of the services sector and booms in mining.

2.15 International comparisons of aggregate data can be misleading, as has been mentioned, owing to different developments in each economy; however, Australia's average percentage growth in plant and equipment investment did not compare well with, for example, the USA, Canada, France or the Federal Republic of Germany in the 1966 to 1980 period.[16]

2.16 The AMC Annual Report of 1985-86 mentioned some of the consequences of the low rate of investment between 1970 and the mid 1980s:

> . ... rising percentage of expenditure on repairs and maintenance relative to expenditure on new equipment, increasing from 28% in 1972 to 68% in 1984;
> . an increase in the average age of the capital stock (now 10% older than was the equivalent capital stock in 1970) and thereby increasing use of dated technology;
> . investment in cost saving technology rather than in expansion of capacity;

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14. Ibid, p.6.
15. Ibid.
16. Ibid, p.11.

- internationally low ratios of research and development expenditures (although R&D expenditure had at that stage markedly increased);
- only moderate rates of productivity growth relative to major competitors; and
- problems with product quality and market image.[17]

C. Adequacy of investment performance - the post-depreciation period

2.17 The substantial depreciation of the $A early in 1985 greatly increased our international trading competitiveness and led to significant increases in real gross investment, especially in manufacturing. The question arises whether Australia still has a serious manufacturing investment problem.

2.18 The BIE argued in their submission to the inquiry that: 'the apparent weakness of investment is largely (but not entirely) illusory.'[18] In support of that position, the BIE made a number of points. First, current manufacturing investment levels may appear low by comparison with those achieved during the resources boom in the early 1980s, but those levels were themselves much higher than normal. Second, although exports of manufactured goods have increased, domestic demand has remained static and there is,therefore, less reason for higher absolute levels of investment. Third, few industries are presently constrained by a lack of production capacity - that is, capacity utilisation levels are not currently abnormally high. Fourth, manufacturers are now able to get greater output from a given level of capital stock owing to factors such as better work practices, substituting labour for capital expansion, technical improvements and increased investment in 'intangibles'.[19] Fifth, real gross investment in manufacturing grew at an average annual growth rate of nearly 12 per cent from the March quarter 1985 to the September quarter 1987 - quite rapidly compared with other sectors. The BIE also argued that 'investment levels by themselves are not very informative' and that the ratio of manufacturing investment to output, which 'has grown quite

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17. AMC Annual Report, 1985-86, pp.74 & 75.
18. Evidence, p.871.
19. Ibid.

rapidly over the past three years and is well above the level applying for most of the 1970s', should be considered.[20]

2.19 The BIE has calculated that:

> ... real manufacturing export growth of about 9 per cent per annum could be sufficient to achieve stability in the external debt to GDP ratio by about 1993. Moreover, a sustained growth in exports of this magnitude could result from modest growth in real gross investment in manufacturing of about 3 to 4 per cent per annum.[21]

2.20 The high growth rate in manufacturing investment in the last 3 years has been encouraging. However, as the joint Australian Chamber of Manufactures (ACM)/Chamber of Manufactures of NSW submission pointed out, that growth has been starting from a very low base. According to the submission, average manufacturing investment growth in the 1974-75 to 1986-87 period and even in the 1981-82 to 1986-87 period was lower than total business investment growth and total business investment growth has not been high.[22] Furthermore, an economy successfully undergoing the sort of major structural change envisaged by current government policy could be expected to be characterised by historically high capital to output ratios.

2.21 The three State Governments which made submissions to the inquiry all considered that the recent high manufacturing investment levels must, at least, continue if Australia is to overcome the serious economic difficulties experienced.

> ... The growth in manufacturing investment over recent years may be viewed as reasonably satisfactory given weak domestic demand, high interest rates and sharp increases in the price of capital goods. However, sustained growth in exports of manufactures will require an additional and more diversified expansion in that sector's productive capacity.[23]

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20. Evidence, p.782.
21. Evidence, p.784.
22. Evidence, p.28.
23. Evidence, p.411.

2.22 Investment growth rates can be very volatile and could quickly decline if there were adverse changes in the world economy and if Australia lost competitiveness through exchange rate movements. There is certainly no cause for complacency in the current figures. The Business Council of Australia (BCA) remarked in evidence that 'the outlook for investment, as shown by expectations figures for this year, is not very strong' and even the early more optimistic expectations for next year:

> ... must be looked at very cautiously indeed, particularly, ... in the manufacturing sector, where developments in our own economy and overseas will cause fairly prompt reactions in investment.[24]

2.23 It is interesting to note that the BIE appears to have changed its view about the prospects for investment in the immediate future. The BIE publication *Australian Industry Trends* stated in January 1988:

> The most recent ABS Private New Capital Expenditure expectations survey indicates an increase of 9 per cent (current prices) in 1987-88 over 1986-87 for total investment. The corresponding figure for the manufacturing (sector was) 5 per cent ...
>
> The expectation figure for manufacturing, after adjustment is made for price changes, implies a fall in investment in real terms. It is disappointing, especially in light of the role this sector is expected to play in overcoming our balance of payments difficulties.[25]

This BIE publication also pointed out that:

> ... (l)easing, the alternative method of gaining capital goods services, has declined in real terms over the past two years ... the only period for which ABS data is available. The decline in leasing by manufacturing firms has been particularly marked.[26]

2.24 The ABS figures on private new capital expenditure for the December quarter 1987, released in April 1988, substantially repeated the negative growth estimate for manufacturing

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24. Evidence, p.377.
25. Bureau of Industry Economics: *Australian Industry Trends*, Issue No. 1, January 1988, p.10.
26. Ibid.

investment in 1988-89.[27] Issue No. 2 of the BIE publication argued that the picture was not:

> ...as bleak as the statistics suggest. The large investment in the aluminium industry in the early 1980s distorted the picture for manufacturing. In fact, non-aluminium investment appears to be maintaining a fairly constant level.

The BIE also argued that investment was taking place 'in those industry groups that have also expanded exports, including Paper and paper products, Non-ferrous metals, Motor vehicles and parts and Industrial machinery and equipment'.[28]

2.25 It is also true that the results of other surveys carried out by business groups were more optimistic than the ABS figures. One of those which was quite encouraging was the MTIA survey carried out in February 1988 which reported an increase in investment in the metal and engineering sector in 1987 of 16.2 per cent with an expected increase in 1988 of more than 20 per cent.[29] Investment growth rates in 1987 by companies in the capital goods sector and by those 'with a strong export commitment' were reportedly higher than average.[30] A survey of over 500 NSW firms carried out by the State Bank and the Chamber of Manufactures of NSW in March 1988 also reported encouraging investment results for the March quarter and good expectations for the June quarter.[31]

2.26 The MTIA submission to the inquiry stated that companies were responding to the increased competitiveness following the depreciation of the $A, but cautioned that the recovery was at an early stage and that there was no guarantee it would be sustained in the future. The MTIA also pointed out that our overseas

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27. ABS Catalogue No. 5626.0, 14 April 1988.
28. Bureau of Industry Economics: *Australian Industry Trends* Issue No. 2, April 1988, p.10.
29. MTIA 1988 National Survey of the Metal and Engineering Industry: *Performance and Outlook*, Executive Summary. March 1988, p.1.
30. Ibid. p.6.
31. State Bank and Chamber of Manufactures of NSW: *Survey of Manufacturing Conditions and Future Prospects in NSW*, March Quarter 1988.

competitors have been undergoing significant industrial development themselves at the same time as our investment levels have been increasing.[32]

2.27 The BIE's submission also differed from the view expressed in its January 1988 *Australian Industry Trends* publication concerning capacity utilisation rates:

> ... utilisation has increased significantly in the past 12 months and is now close to the high levels of utilisation reached in December 1985.[33]

A survey of 45 large manufacturing enterprises, which account for about a quarter of total investment in the manufacturing sector, carried out in September 1986, reported that 'firms indicated that rates of capacity utilisation are currently at relatively high levels'.[34] Using the BIE's own estimates, capacity utilisation would be higher now than in September 1986. The Australian Chamber of Manufactures also considered, when giving evidence, that capacity utilisation was high.[35] The State Bank/ACM June quarter 1988 survey found that 21 per cent of the more than 500 respondents were operating above 90 per cent of their capacity with another 46 per cent operating between 70 and 90 per cent of capacity. The expectation was for even higher utilisation levels in the September quarter 1988.[36]

2.28 The improvement in manufacturing investment levels coupled with our improved competitiveness has enabled Australia to increase its export performance. The volume of exports of manufactured products has been growing since 1983-84, with the strongest growth rate in 1986-87, of 14 per cent in real terms.[37]

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32. Evidence, p.668.
33. BIE: *Australian Industry Trends*, Issue No. 1, January 1988, p.10.
34. National Institute of Economic and Industry Research, *The Determinants of Private Investment in Australia*, November 1986, p.36.
35. Evidence, pp.68 & 69.
36. State Bank/Australian Chamber of Manufactures: *Survey of Manufacturing Conditions and Future Prospects in NSW*, June quarter 1988, pp. 12 & 13.
37. BIE, *Australian Industry Trends* Issue No. 1, January 1988, p.14.

> ... In 1986-87 manufactured exports ... contributed $1.5 billion of the $3.2 billion increase in total merchandise exports.[38]

Our manufacturing sector is also now directing a greater proportion of its production to exports than before the depreciation - some 21 per cent in the September quarter 1987 compared with 15 per cent before. This trend has been assisted by a subdued level of domestic demand.[39] The transport and equipment sector and the miscellaneous manufactures sector increased the volume of their exports in 1987 by 26 and 18 per cent respectively. Exports of processed non-ferrous metals in 1987, which account for one-third of total manufactured exports, increased in volume by 35 per cent. The percentage increase in current price value of manufactured exports was 28.5 per cent.[40]

2.29 At the same time the growth rate in imports of manufactured goods, which had been 14 per cent in real terms in 1984-85, was reduced to 3 per cent in 1985-86. In 1986-87, the level of real imports actually fell by 7 per cent.[41] However, the volume of manufactured imports which had been declining since September 1985 rose again in the June, September and December quarters of 1987 although this is attributable mostly to imports of industrial supplies for Australian industry.[42] The fall in the growth rates of import values and volumes after the depreciation resulted more from reduced domestic demand than from any significant degree of import substitution.[43] In fact, evidence was presented that our capital goods producers have changed their orientation as part of the decline of manufacturing. Capital goods producers have shifted their focus to specialised

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38. Department of Industry, Technology and Commerce: *Australian Industry : New Directions*, AGPS, Canberra 1987, p.16.
39. BIE *Australian Industry Trends*, Issue No. 1, January 1988, p.14.
40. BIE: *Australian Industry Trends*, Issue No. 2, April 1988, p.14.
41. Ibid. p.17.
42. Ibid, p.15.
43. BIE: *Australian Industry Trends*, Issue No. 1, January 1988, p.14.

equipment. Their potential for growth now lies more in the export market rather than competing with imports.[44]

D. Summary

2.30 Investment in the conventional sense refers to the acquisition of physical capital and inventories. There are problems in its measurement and reasons for exercising some caution in drawing conclusions from the data. Other forms of investment - such as expenditure on marketing, skills training, research and development, and computer software - are becoming increasingly important in terms of productivity, production and profitability. Expenditure on such forms of investment could be better identified than at present.

2.31 The growth rate of conventional investment in manufacturing in the 1970s and the first half of the 1980s was considerably less than it had been in the 1950s and 1960s. That reflected a significant decline in the role of manufacturing in the Australian economy.

2.32 Investment levels in manufacturing picked up subsequent to the substantial depreciation of the $A in 1985. There has also been encouraging growth in exports of manufactured products since then. Australia has been less successful in terms of import substitution, although subdued domestic demand appears to be keeping down the level of manufactured imports.

2.33 While recent figures are encouraging, a major question arises concerning the sustainability of the post-depreciation upturn in manufacturing investment. The competitive gains from the 1985/86 depreciation are currently being eroded by a currency appreciation which is in turn caused by a turnaround in trade volumes coupled with a, possibly temporary, commodity price recovery. Therefore, it is still too early and the situation too potentially volatile for complacency about investment performance or improvements in the trade of manufactured goods. An

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44. Evidence, p.931.

understanding of the factors which promote or inhibit investment and an analysis of policies which facilitate strong investment are still required.

CHAPTER 3

DETERMINANTS OF INVESTMENT

A. Introduction

3.1 A number of factors can be identified which one would expect to have an influence, either positively or negatively, on the investment decisions of manufacturers. It is more difficult to say which elements in practice have a greater importance than others, since this may vary between industries, between firms and over time.

3.2 The following factors are generally listed as determinants of investment:

- the current demand and expected level of demand for output;
- the level of present capacity utilisation;
- the current and expected level of net returns;
- corporate taxes, and any investment or depreciation allowances;
- the availability and cost of capital, including the price of capital goods and borrowing costs, as reflected in real interest rates;
- cash flows;
- the risk profile of the enterprise, reflected in debt to equity ratios;
- the availability and cost of labour with the required skills;
- the availability and cost of other input factors; and
- expectations about general macroeconomic activity, which includes factors such as the exchange rate and rate of inflation.

3.3 Whether investment will take place in a particular industry or enterprise will involve a judgement as to whether the

net return from that investment will be higher than the net return likely from any other possible investment options. Investment decisions, therefore, are dependent not just on factors affecting the income and expenditure of the enterprise but also on those affecting alternative investment opportunities. In the long-term, industries and the economy itself will be restructured as a result of those pressures. In the short-term, the structure of an industry can inhibit investment, and some comments are made in this Chapter about the structural problem of fragmentation.

3.4 Since investment inevitably involves an assessment of the likelihood of future returns, the expectations of manufacturers about future levels of demand and costs are of considerable significance. In this context the course of the inquiry has revealed that investors particularly desire predictability in government policies and a stable macroeconomic environment to allow long-term investment decisions to be undertaken with the least degree of uncertainty possible. Uncertainty increases the risk premium attached to the required rate of return and therefore inhibits investment. Volatile exchange rates, interest rates, taxation policies, wages rates, the industrial relations climate, or almost anything else which may vary in a manner difficult to predict, create uncertainty and attack business confidence.

B. The main influences

3.5 As stated above, there is some difficulty in saying which of the positive or negative influences have a greater effect than others in practice. There is a wide range of factors involved, many of which interact with each other.

3.6 Matters which were mentioned in evidence as being of particular importance among the possible influences were the level of demand; capacity utilisation; the expected rate of

return; the availability and cost of capital, and, therefore, interest rates; replacement of labour by capital; and business confidence or uncertainty and therefore risk premiums. That covers half of the fairly comprehensive list of factors mentioned in paragraph 3.2.

3.7 Surveys of the opinions of manufacturers have been carried out as a means of casting some light on the question of the key determinants. Brief reference was made in Chapter 2 to the survey carried out in September 1986 of 45, mostly large, manufacturing companies by the National Institute of Economic and Industry Research (NIEIR) in conjunction with the Australian Chamber of Manufactures. The companies account for about one quarter of total investment in the manufacturing sector.

3.8 The survey found that out of five 'groups' of factors - finance/profitability; capacity; government policy; input considerations; and business environment - the most important group as far as the investment decision-making process was concerned was that headed 'finance/profitability'.[1] That heading included: the expected rate of return; recent profit performance; retained earnings; current cash flow; access to debt or equity finance; the availability of leasing arrangements; and nominal and real interest rates. The least important group of factors was 'input considerations' although this included the cost of fixed capital equipment which was the factor considered by more respondents than any other as a constraint on investment.

3.9 The survey also dealt with the response time for changes in the major determinants to increase investment. The fastest time response would come from increased demand, resulting in higher capacity utilisation. An improved business and technological environment would produce the second quickest investment response and a lowering of input costs would have the longest time-lag before results were achieved. The response time

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1. National Institute of Economic and Industry Research: *The determinants of private investment in Australia*, November 1986, p.49.

is an important element in considering possible policy action by the Government.

3.10 The question of what are the most important factors influencing investment decisions is, of course, different from the question of whether individual factors are at any time acting as positive or negative influences. The survey also provided information on that second aspect. Some factors in the 'finance/profitability' group were considered at the time to be quite favourable to investment (expected returns, recent profits, retained earnings and cash flow); the others (access to external finance, interest rates, and leasing availability) were either then neutral in their impact or mild inducements or mild constraints. Healthy profits, strong expected and good current demand reportedly made interest rates less significant, particularly when a long-term corporate plan existed.[2]

3.11 The then current level of direct labour costs and labour on-costs were considered by roughly half the companies as conducive to investment, and by only approximately 30 and 35 per cent respectively as constraints. A surprising finding was that 53 per cent felt that the availability of skilled labour was having a neutral impact on investment decisions. The conductors of the survey offer as a possible explanation the large size of the firms involved, which are able to train their own labour.[3]

3.12 At the time of the survey a large majority considered that the competitive environment; current and prospective developments in the availability of improved, appropriate technology; and expected domestic demand and current overall demand were all conducive to investment.

3.13 Twenty-seven per cent of the companies stated that the expected level of external demand (exports) was having no effect on their investment decisions. Foreign-owned companies were reported to be disproportionately represented in that sizeable

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2. Ibid. p.40.
3. Ibid. p.48.

minority, perhaps indicating a disinclination of such companies to explore export markets.[4] Given the importance of foreign-owned companies which account for one-third of activity in the Australian manufacturing sector, and the need to expand exports, this may be a matter requiring further examination.[5]

3.14 A sizeable majority considered that the general macroeconomic uncertainty (resulting from weakened economic growth, currency depreciation and high interest rates) and the corporate tax rate were acting as disincentives to investment. The fringe benefits tax was also reported as a mainly mild constraint, having increased the tax burden and having added to uncertainty.[6]

3.15 The survey was only one of four elements of the NIEIR study - the other three being: a review of the broad macroeconomic statistical indicators relating to investment behaviour in Australia; an analysis of the published data from 324 major listed public companies; and an econometric analysis of investment determinants based on quarterly National Accounts data. The econometric evidence suggested that demand and capacity utilisation levels are the most important factors in the investment decision.[7] That does not appear to coincide with the survey results, although the survey indicated that increased demand would produce a quicker investment response than other factors.

3.16 The macroeconomic statistics and the econometric evidence also indicated that the role of real interest rates was more important than the survey found. The NIEIR reasoned that short-term interest rates influence 'expectations about the fundamentals of the economy ... expectations of the future demand and the future degree of uncertainty.' There is also a probable effect on the financial stability of companies since debt to equity ratios are now far higher than they used to be. The NIEIR

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4. Ibid. p.43.
5. DITAC: *Australian Industry New Directions*, 1987, p.8.
6. NIEIR: *Determinants of Private Investment*, p.45.
7. Ibid. p.3.

suggested that the real rates of return of the larger companies surveyed were higher than the real interest rates and this resulted in the difference in the results of the survey and the other evidence.[8]

3.17 It is pertinent at this stage to mention the caution with which survey results must be approached. The New South Wales Government submission compared the results of surveys by the Committee for Economic Development of Australia (CEDA) and NIEIR with certain issues of the quarterly business surveys conducted jointly by the National Australia Bank and the Australian Chamber of Commerce. The NSW Government found that assessments of the key factors influencing investment decisions appeared to change over time:

> The results of individual surveys may be more closely tied to the economic or political climate at the time that the survey was conducted than to respondents' long term perception of investment determinants.[9]

Survey results need to be used in conjunction, therefore, with econometric and statistical analysis in the way that the NIEIR study was conducted.

B.1 Demand and capacity utilisation

3.18 These two elements obviously have a close interaction. The extent to which a change in current and expected demand will affect investment decisions will depend on the level of capacity utilisation. An increase in current demand will not necessarily result in an increase in investment if there is capacity to expand production using existing facilities.

3.19 Reference was made in Chapter 2 to current levels of capacity utilisation and whether they were presently high or low. There appears to be some disagreement whether the rising levels have reached a stage where production will have difficulty

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8. Ibid. pp.4 & 5.
9. Evidence, p.114.

meeting demand, and where increased investment is now required. Total manufacturing production improved throughout 1987 returning to levels close to the December 1981 peak.[10] There has, however, been quite a wide diversity in the fortunes of the various industries within the manufacturing sector - in terms of their growth in production and investment.

3.20 The Australian Chamber of Manufactures submission outlined recent manufacturing production activity by industry sector.[11] Industry sectors that have performed better than average in recent years are: food, beverages and tobacco; paper (and presumably paper products) and printing; chemicals, petroleum and coal products; and other manufacturing (includes wood, wood products and furniture, leather, rubber and plastic products, non-metallic mineral products, industrial machinery and equipment). Sectors that have shown weakest activity are basic metal products and textiles, clothing and footwear. The fabricated metal products sector has been below average but improving while the transport equipment sector has performed at both above and below average levels.

3.21 The BIE pointed out the history before the $A depreciation of 'poor growth performance in the capital stock for textiles, clothing and footwear' and the 'rapid accumulation of capital in the transport equipment sector'.[12] There has been a similarly wide disparity between industries since the early 1985 depreciation in the growth rates of capital stock. Industries experiencing strong growth since early 1985 have been paper and paper products (including presumably printing), transport equipment, and food, beverages and tobacco. Weak growth has occurred in the fabricated metal products, chemical products and petroleum, and basic metal products industries.[13]

3.22 Figures presented later in the BIE submission for growth rates in real gross capital expenditure present a different

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10. BIE: *Australian Industry Trends*, Issue No. 2, April 1988, p.5.
11. Evidence, pp.18-24.
12. Evidence, p.804.
13. Ibid.

picture from the growth rates in capital stock. Real gross capital expenditure in the chemical products and petroleum industry, for example, grew more strongly in both the December 1984 to June 1987 and 1987-88 periods than it did in the paper and paper products industry - the reverse of the comparative positions indicated by the capital stock growth rate figures.[14] The capital stock in different industries may have different asset lives (or rates of economic depreciation), requiring higher rates of investment in some than others simply to maintain capital stock levels. Consequently, comparison of rates of investment between industries requires some caution. Increases in investment rates within industries are useful, however, in indicating responses to capacity utilisation levels and current and expected demand.

3.23 The strong investment trend in the transport equipment industry up to 1986-87 was reversed in 1987-88 perhaps indicating excess production capacity in the industry. Also, strong real investment growth has occurred in 1987-88 in the textiles, clothing and footwear industry.[15] Investment has also picked up in the chemical products industry where lack of production capacity was becoming a potential problem.[16]

3.24 The BIE submission also provided an assessment of the capacity existing within individual industries for further expansion without additional investment. They found that the food, beverages and tobacco industries, paper and paper products and transport equipment industries have high levels of spare capacity; while to some extent the fabricated metal products industry, more surely the basic metal products industry and, in particular, the chemical products industry appear to be constrained by high capacity utilisation. The measures used gave less clear an indication for the textiles, clothing and footwear industry.[17]

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14. Evidence, p.850.
15. Evidence, p.849.
16. Ibid.
17. Evidence, pp.807 & 854.

3.25 Capacity constraint in the basic metal products and in the fabricated metal products industries was seen as a problem since those industries account for more than 40 per cent of our manufactured exports. The chemical products industry which appeared to have high capacity utilisation was also regarded as a problem since it had performed poorly over the last couple of years in export growth and in import substitution.[18]

B.2 Return on investment and profitability

3.26 Investment in an enterprise ultimately is undertaken for the purposes of making a profit and is unlikely to take place unless the expected rate of return is regarded as adequate. To be adequate the expected rate of return after tax would need to at least cover the cost of capital plus depreciation and any premium added for the degree of risk involved - this is often called the minimum or required rate of return or the user cost of capital. Clearly, factors such as inflation, exchange rates, real interest rates, levels of taxation and other charges, the sale price of goods produced and the cost of labour and other inputs will all affect the alignment of required and expected rates of return. Not surprisingly, a number of submissions including those from the Confederation of Australian Industry (CAI), the Business Council of Australia (BCA) and the Metal Trades Industry Association (MTIA) identified profitability as the major determinant of investment.[19]

3.27 The Australian Council of Trade Unions (ACTU) referring to figures from Budget Paper No. 1, 1987-88, pointed out that there have been large increases from the depressed profit levels of 1982-83 in the corporate sector, measured by the share of after-tax company income of the gross product of the corporate sector. Despite the return to 1970s levels of profitability, business investment has remained at low levels.[20]

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18. Evidence, p.855.
19. *Submission No. 29, p.1; Evidence, p.371; and* Evidence, p.647.
20. Evidence, pp.438-440.

3.28 The BCA, however, claimed that there was a:

> ... steady deterioration in the financial position of the enterprise sector in Australia since 1980-81. This implies a weakened incentive to invest and an increasing inability to do so from internally generated funds.[21]

The BCA referred to an article in the August/September 1987 BCA Bulletin which calculated that internal cash flows generated by private corporate trading enterprises in the five years to 1985-86 had been insufficient to 'even maintain their existing level of operations ...'[22]. In evidence given at a public hearing the BCA brought their comments up to date by saying that profits had recovered somewhat since 1985-86 but that the financial health of corporations was still not good.[23]

3.29 There are different ways of measuring profitability and different results may be obtained depending on whether depreciation is measured on an historical cost basis or replacement value. Differences may also emerge between profit measured per unit of output or per unit of capital stock (return on funds employed). Another BCA Bulletin article pointed out those differences and also referred to factors which may have increased the required rate of return, such as increased uncertainty and therefore risk premiums, higher real interest rates and the growing contribution of capital equipment relative to labour. An increase in the required rate of return means that the expected return on investment would have to be higher than before for investment levels to improve. The BIE also calculated that the required rate of return, or user cost of capital, had 'risen appreciably in recent years.'[24]

3.30 The above comments on profitability and the possible impact on investment levels refers to the business sector. In the last couple of years, as was mentioned in Chapter 2, investment in the manufacturing sector has risen significantly, contrary to

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21. Evidence, p.371.
22. Exhibit No. 9, p.1.
23. Evidence, p.376.
24. Evidence, p.835.

the aggregate business investment trend. The September 1986 survey of 45 mostly large manufacturing companies, to which reference has already been made, found that a majority thought the expected rate of return, recent profit performance, retained earnings and current cash flow were all conducive to further investment.[25]

3.31 The growth rate in nominal profits in the manufacturing sector over the past three years, according to the submission from the BIE, has been about equal to the inflation rate.[26] The BIE argued that profitability in manufacturing has been below that for mining and agriculture for many years which explains and justifies higher levels of investment in those other sectors. Profitability levels in manufacturing seem to have picked up substantially, however, in 1987 company profits before tax rose some 39 per cent. The largest improvements occurred in the basic metal products, food, beverages and tobacco, and paper and printing sectors. The improvement in company profits in the manufacturing sector seems to be continuing into 1988 - the level in the nine months to 31 March 1988 being 45 per cent above the figure for the corresponding period in 1986-87. The basic metal products sector showed an 88 per cent improvement in profits over the corresponding 1986-87 period while profits in textiles, clothing and footwear improved only 7 per cent.[27]

3.32 The improvement in profits in manufacturing has helped raise the rates of return and will make it more competitive with other sectors for investment capital. Rates of return in the manufacturing sector were consistently below the average for all industries in the period 1970-71 to 1986-87. Since the poor economy-wide performance of 1982-83, average annual rates of return in manufacturing have risen to levels above those for the second half of the 1970s if not yet to those enjoyed in the early 1970s. Return on capital between 1984-85 and 1986-87 was still

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25. NIEIR: *The Determinants of Private Investment in Australia*, Nov. 1986, pp.37-39.
26. Evidence, p.844.
27. Australian Bureau of Statistics *Company Profits, Australia, March Quarter 1988* Catalogue No. 5651.0.

higher in the finance and business services; mining; and transport, storage and communication industries than it was in manufacturing.[28]

3.33 Within manufacturing there has been a wide divergence between the profit levels of the different industries just as there has been between the levels of investment. In a number of cases recent profit performance does not correlate with investment trends, leading the BIE to conclude that the nexus between them is weak.[29] Material prepared by the ACM, however, offers partial explanations for the lack of correlation in terms of capacity utilisation levels which can alter the time relationship between profits and investment. Other factors such as expectations about future demand and rates of return, or the existence of a Government plan for restructuring of an industry can also affect the relationship between profit and investment trends.[30]

B.3 Cost of finance/interest rates

3.34 Mention has been made earlier in this Chapter of the role of interest rates as a determinant of investment. The econometric and statistical evidence indicated they were of more importance than would have appeared from the survey results of large manufacturers. The BIE pointed out that high interest rates not only increase the cost of finance experienced by the firm and the required rate of return on investment but they also suppress demand.[31] As the BIE also pointed out high nominal interest rates can cause significant cash flow problems regardless of the ameliorating impact of tax deductability.

3.35 The large surge in inflation in the 1970s outpaced nominal interest rates resulting in pre-tax real interest rates

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28. Australian Bureau of Statistics: *Australian National Accounts - Estimates of Capital Stock 1986-87* Catalogue No. 5221.0, p.44.
29. Evidence, p.844.
30. ACM *Manufacturing Investment - How can we Explain Recent Trends* in *The Manufacturing Report*, No. 1, April 1988, pp.4&5.
31. Evidence, p.824.

becoming negative between March 1973 and September 1977.[32] Nominal rates then rose substantially at the beginning of the 1980s taking the pre-tax real interest rates up as well. While this may have encouraged an inflow of foreign capital, or lessened the outflow of capital and helped contain excessive domestic demand, it made investment by Australian businesses that much less competitive compared with countries experiencing lower rates.

3.36 Post-tax real interest rates are obviously lower than pre-tax rates owing to the deduction allowed for nominal interest payments. From March 1970 to early 1988, post-tax rates have been positive only during 1984 and part of 1985.[33] This represents a subsidy on investment through the corporate tax system. Post-tax rates have been generally rising, however, since 1974-75.

3.37 Corporate borrowings increased substantially in the 1980s - initially in the expectation of good economic growth and then owing to the decline in cash flow during the 1982-83 recession.[34] Debt financing increased in comparison to equity financing of investment during the same period, probably in part as a result of financial deregulation. Interest repayments have therefore assumed a much greater share of the cash flow of businesses. The increase in corporate borrowings from overseas sources left companies vulnerable to exchange rate changes. The $A devaluation added to the impact of high interest rates.

3.38 Quite apart from the cost of debt finance there is the question of the availability of funds. Small businesses, particularly those seeking to undertake new ventures, can find it difficult to offer sufficient security to obtain the finances they require. The financial sector looks for returns on investment which would allow debt repayment on a time scale which is often too short.

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32. Evidence, p.826.
33. Ibid.
34. Evidence, pp.46-47.

3.39 The lack of finance for new ventures was the reason for the establishment of the Management and Investment Companies (MIC) scheme in 1984. More than two-thirds of the investment so far under the scheme has been in manufacturing.[35] The MIC Licensing Board indicated there is likely to be a continuing shortage of venture capital for the foreseeable future. The Board also commented that changes to the taxation system in recent years had disadvantaged investment in new higher-risk enterprises compared with investment in established businesses. The capital gains tax and dividend imputation were particularly mentioned in this regard since investors in new ventures were not anticipating dividends for some years and would previously have looked for capital gains as their reward.

C. Other factors

C.1 Fragmentation

3.40 The New South Wales Government's submission stated that there is a structural problem of fragmentation - many Australian firms are too small to compete in international markets. They lack 'manufacturing technologies, the marketing or management skills, or financial backing to invest to a level which makes them internationally competitive.'[36] Excluding enterprises with less than four people involved, there are an estimated 23,000 firms involved in the manufacturing sector, 96 per cent of which 'employ less than 100 people and account for one quarter of turnover'.[37]

3.41 A November 1987 survey of the opinions of 25 Sydney-based manufacturers published by the Committee for Economic Development of Australia (CEDA) supports the view of the NSW Government concerning the problem of fragmentation. Eighteen of the 25 interviewees reportedly gave considerable prominence to

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35. Evidence, p.151.
36. Evidence, p.115.
37. Department of Industry, Technology and Commerce: *Australian Industry New Directions*, AGPS 1987, p.8.

this issue.[38] The Australian Manufacturing Council (AMC) also identified fragmentation as a problem in a 'number of industries such as metal fabrication and general printing' and said that the Aerospace Industry Council had similarly reported the issue. The large number of small firms leads to excess capacity and low returns. This provides an impetus towards mergers and takeovers to establish a rational scale of operation, but in the process, can create uncertainty and discourage investment.[39]

C.2 Government regulation

3.42 Another perceived impediment to business activities and expansion which must be mentioned is government regulation. Investors are reportedly greatly frustrated by the time delays and complexity of the process of gaining approvals from many Government Departments and from the various layers of government - local, State and federal. This issue was mentioned by both large and small manufacturers - the CEDA survey of 25 Sydney based *manufacturers; BHP Steel International Group; Exxon* Chemical Australia Ltd; and Southern Cross Corporation Ltd of Queensland. The Commonwealth and most State Governments have introduced programs attempting to deal with the problem, but obviously much more needs to be done.

C.3 Fixed capital assets and labour costs

3.43 The high cost of fixed capital assets, particularly following the $A depreciation, discourages investment in manufacturing. The significance of this factor is increased by the high percentage of Australia's capital equipment needs being met from imports.

3.44 Labour costs clearly influence investment decisions. If labour costs are perceived as high this may encourage investment

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38. Aldrich, B.: *Manufacturing Investment: What 25 Manufacturers Say*, Committee for Economic Development of Australia, Information Paper IP26, Nov. 1987, p. 20.
39. Evidence, p.597.

in equipment as a substitute for labour. If such capital/labour substitution is not possible high labour costs may discourage investment. Labour costs, as measured by real wages, have fallen over the last five years and this has improved Australia's competitiveness by comparison with a number of major industrial countries. One witness argued, however, that virtually all of the gains from investment and productivity over the period 1969 to 1985 were passed on as wage increases. The argument presented was that large-scale increases in investment expenditure were therefore unjustified.[40]

C.4 Industrial relations

3.45 The degree of harmony in industrial relations is another factor influencing investment decisions. The BHP Steel International Group and the Altona Petrochemical Company Ltd referred to industrial relations problems as an adverse influence at present. Loss of production, according to BHP Steel, is reflected primarily for them in reduced exports which can lead to dissatisfied overseas customers and a reputation for unreliability.[41] The Quarterly Report of the Steel Industry Authority for December 1987, however, indicated that while 1987 was a particularly bad year for industrial disputes in the history of the Steel Plan, the loss of man hours was considerably reduced in the second half of the year.[42] The Metal Trades Industry Association (MTIA) also referred to the need to promote harmonious industrial relations, which is an important aim of the compact with the metal unions proposed in December 1986.[43] The number of working days lost in Australia as a result of industrial disputes has been considerably reduced, however, in the five years to 1987 compared with the previous five year period.[44]

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40. Evidence, pp.278-288.
41. Evidence, p.715.
42. Steel Industry Authority Quarterly Report, December 1987, p.6.
43. Evidence, p.657.
44. Australian Bureau of Statistics: *Industrial Disputes Australia 1986*, Catalogue No. 6322.0.

C.5 Inflation rate and exchange rate

3.46 A high inflation rate and fluctuations in the exchange rate are further disincentives to investment. Australia's inflation rate has been gradually falling but is still above that of our major OECD trading partners.[45] Our inflation rate leads to increases in nominal interest rates and generally lowers business confidence. A fluctuating exchange rate similarly leads to uncertainty about the net returns to investment. Unfortunately, as the Business Council of Australia stated, ours is an economy which relies heavily on resource exports and the exchange rate for the currency is strongly affected by changes in world prices for commodities.[46]

D. Summary

3.47 A large number of factors influence the decision to invest and it is difficult to identify the key determinants. Some which appear to have particular significance, however, are the level of demand (both actual and expected), the anticipated after-tax rate of return, the availability and cost of finance (from both internal and external sources) and comparative labour and labour on costs.

3.48 Behind those major determinants are a wider range of factors which influence them and the general economic climate. The level of capacity utilisation at a given time affects the speed with which increased demand will result in increased investment. The cost of input factors in the production process, such as labour, will affect the rate of return, as will the level of taxation. The level and volatility of the inflation rate and the exchange rate affect not only prices and the rate of return but business confidence itself.

3.49 The Government can have an important influence, through its monetary, fiscal, taxation and wages policies on both the

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45. Department of the Treasury: *The Round-up* March 1988. Table 25: International Consumer Prices, p.49.
46. Evidence, p.396.

broad macroeconomic environment and on specific determining factors such as the level of domestic demand. Through specific industry assistance policies or through regulations on business activity the Government can also encourage or retard the level of investment.

CHAPTER 4

INTANGIBLE INVESTMENT

A. Introduction

4.1 This Chapter is concerned with two forms of 'intangible' investment - investment in skills formation and in research and development (R&D). Skills formation is the term used to describe the 'economic, social and industrial context which determines the type and level of skills acquired or imparted and the methods used to acquire or impart those skills'.[1] Education and training are complementary in the acquisition or imparting of skills, just as the formal education system and the more informal processes taking place in industry are complementary. In this report education and training, or skills training, are used in place of the technical term 'skills formation'. Skills training refers to initial workforce training as well as retraining, taking place in a classroom setting and/or on the shop floor. Another important form of intangible investment, marketing, has not been examined as part of this inquiry; however, the marketing of elaborately transformed manufactures and traded services is the subject of a separate inquiry the committee has recently commenced.

4.2 The importance of investment in skills training and in R&D is greater than a simple measure of their share of total investment would indicate. Research and development expenditure reflects a desire to be innovative in both products and processes. Investment in skills training is an essential extension of investment in physical capital and R&D. Unless the skills of Australia's working population are maintained and extended, the ability to make use of the latest technology in physical plant and equipment will be severely hampered and Australia will be unable to compete with more efficient and skilled nations. Also, recurrent education will be

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1. Curtain, Krbavac & Stretton: *Skill Formation in Australia: In Search of a Research Agenda*, Conference Paper for Workshop on Skill Formation, 6, 7 & 8 August 1986, p.1.

increasingly necessary as rapid technological change and industry restructuring demands a more flexible workforce.

4.3 The availability of skilled labour and the adequacy of skills training and education were raised by the majority of witnesses in submissions and evidence. Most witnesses considered the current level of investment in skills training to be inadequate. The committee was told that shortages of skilled labour are being experienced throughout manufacturing industry.

4.4 The issue of investment in research and development did not receive such extensive comment in submissions as training investment did. Expenditure on R&D in Australia by the business enterprise sector is, however, at a very low level by comparison with other comparable OECD countries. This is a situation which needs to be remedied if manufacturing industry in Australia is to have a strong future. The committee has accordingly drawn attention to investment in research and development in the second part of this chapter.

B. International comparision of expenditure on education and training

4.5 Governments, firms and individuals all contribute to expenditure on education and skills training. The contribution of governments is the easiest to measure. Estimates of expenditure by firms and individuals are complicated by the sheer numbers of firms and individuals involved as well as by various hidden costs, such as wages forgone, and the value of lost production. It is even more difficult to extract from broad data reliable figures on training investment in the manufacturing sector alone. Comparisons between countries need to be treated with caution because of different approaches to achieving a skilled workforce as well as the difficulties of obtaining data collected on a consistent basis.

4.6 A paper arising out of a 1986 Workshop on Skills Formation, sponsored by the Bureau of Labour Market Research and the National Training Council, contains a comparison of expenditure in 1980 on education and training by Australia, the United States, Japan, and West Germany. Those latter three countries were selected as 'examples of industrialised countries which have managed successful economies over an extended period' and because 'each country has a quite different skill formation system.'[2] The training systems in Japan, West Germany and the United States are described in an appendix to one of the papers presented to the 1986 Workshop on Skills Formation previously mentioned and are summarised below.[3]

4.7 The government in Japan appears to take a fairly prominent role in planning the course of vocational training. Individuals are expected to pay for their own tertiary education, which is mainly privately operated. Employers, however, are expected to take responsibility for training their employees and consequently much of the vocational training in Japan is supplied within firms. This system operates most effectively for lifetime employees of large firms, who receive on-the-job training and for whom the firms pay for off-the-job training courses. The government does provide some assistance for workers undergoing training and for smaller firms in providing training for their employees.

4.8 In West Germany skills training is dominated by what is called the `dual' or apprenticeship system. This involves a mixture of employment and study and covers a wide range of occupations. Financing is provided by employers with a contribution by government. Employees assist through receiving lower wages during the training period. Older workers are free to

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2. Krbavac, L. and Stretton, A.: *Wealth from Skills, Measures to Raise the Skills of the Workforce, Appendix: Skill Formation and Structural Adjustment, the Responsiveness of Industry Training*, p.51.
3. Curtain, Krbavac & Stretton: *Skill Formation in Australia: In Search of a Research Agenda*, Bureau of Labour Market Research Paper, July 1986, Appendix II pp.9-14.

participate in the dual system and opportunities exist for further training or retraining beyond the dual system. Employers and employees contribute money to the Government to help fund such retraining. A separate full-time vocational education system operates for certain occupations, as well as ordinary and technical universities, funded by government. Opportunities exist for those who pass through the vocational education system or the dual system to proceed to higher technical educational institutions.

4.9 In the United States, the apprenticeship system is far less well developed and based mainly on the construction industry. Firms and individuals rely to a much greater extent on the education system to provide training. Non-collegiate post-secondary schools, which are mostly privately-run, provide trade type training in specific skills and for particular occupations. As well, there are the degree-granting institutions - community and technical colleges, undergraduate colleges and universities. Individuals are expected to pay for their own post-secondary education although firms also contribute and provide in-house training. In the two-year community and technical colleges fees account for about one-third of costs.

ESTIMATES OF EXPENDITURE ON EDUCATION AND TRAINING
(Percentage of GDP, 1980)[4]

	Australia	USA	Japan	W.Germany
Government				
. Education	5.9	6.8	5.9	4.7
. Labour Market Training Programs	0.07	0.3	n.a.	0.5
Firms	0.9	1.2	1.4	2.0
Individuals	0.3	0.5	0.6	0.1
Totals	7.2	8.8	7.9	7.3

n.a. - not available

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4. Krbavac, L. & Stretton, A.: op.cit. pp.54-57.

4.10 The difficulties in obtaining comparable data and the caution with which the above estimates must be treated are spelled out in the paper by Krbavac and Stretton. For example, expenditure by the public sector on training its own employees was not taken into account owing to 'the unavailability of readily accessible data'.[5] Figures on expenditure by firms and individuals do not appear to be directly available but had to be derived from various sources, sometimes using several steps in the process. Within the above limitations it may still be observed that government spending on education and training as a proportion of GDP in Australia was comparable with such spending in Japan, higher than in West Germany, but below the level in the USA. The level of private investment in skills training in Australia, however, is below that in the other three countries. West German industry contributes an estimated 72 per cent of the total cost of vocational training in that country.[6] The estimated contribution of industry in Japan is even higher. Skills training in Australia is funded mainly by the public sector.[7] Various surveys have highlighted the relatively low level of formal or informal on-the-job training by private Australian companies.[8]

4.11 Many witnesses acknowledged the need for firms, as the ultimate beneficiaries of skills training, to contribute more to training costs. Evidence presented to the committee suggested that many firms view expenditure on training as an operating cost rather than as an investment. Overall commitment to skills training was often criticised. The ACTU considered investment in this area to be a critical issue and stated that for 'too long in Australia expenditures on skill formation, including training, have been regarded as a cost to be cut when conditions are tough, rather than an investment to be amortised over a period of years.'[9] Ultimately, it is the current shortage of skills in Australia and the increased level of skills that will be required for our future prosperity, rather than international comparisons

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5. Ibid, p.53.
6. Evidence, p.513.
7. Ibid.
8. Curtain, R., *Skills Enhancement and Industry Restructuring*, Heavy Engineering Board Secretariat, 1986, p.69.
9. Evidence, p.490.

of expenditure, which provide the basis for arguing that investment in skills training needs to be raised.

C. Skills shortages, training deficiencies and proposed remedies

C.1 Skills Shortages

4.12 The BIE , on the basis of its own research as well as surveys by the Australian Chamber of Manufactures and CAI/Westpac, stated that 'there is increasingly strong evidence that investment and output are constrained by skilled labour shortages'.[10] The Victorian and New South Wales Government submissions, among others, also commented on the skills shortages and mentioned the low secondary school retention rates[11] and the image problem of industry - related occupations.[12] The participation rate in post-secondary education among Australians in the 16 to 24 years-old age group - 36 per cent in 1981 - was significantly below that in the USA (73 per cent), Japan (54 per cent) and West Germany (45 per cent).[13]

4.13 The March quarter 1988 survey of the State Bank/Chamber of Manufacturers of NSW found that a 'severe shortage of skilled labour (continued) to be a major problem among NSW manufacturers'.[14] The same survey found, however, that the reported number of apprentices being employed was less than it had been 12 months previously. That overall result was heavily influenced by a large decline in the number of apprenticeships in the basic metal products sector, which probably resulted from the re-structuring process taking place in the iron and steel industry. The June quarter 1988 survey, carried out by the same bodies, found that the skilled labour shortage had worsened and

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10. Evidence, p.841.
11. Evidence, p.414 H.
12. Evidence, p.116.
13. ACTU/TDC Mission to Western Europe: *Australia Reconstructed* AGPS, Canberra 1987, p.118.
14. State Bank/Chamber of Manufactures of NSW: *Survey of Manufacturing Conditions and Future Prospects in NSW*, March quarter 1988, p.1.

was expected to deteriorate further during the September quarter. The shortage was affecting all industry sectors and all regions of the State, but was worst in the clothing and footwear, transport equipment, and miscellaneous manufacturing sectors.[15]

C.2 Deficiencies and proposed remedies

4.14 The New South Wales Government proposed that programs be introduced within the education system to show the value of industry to the economy and the nation. Additionally, a range of other measures was put forward to attack the problem of skill shortages, such as 'improved work organisation, creation of clearer pay differentiated career paths {and greater use} of multi-skilling'.[16] The New South Wales Department of Technical an Further Education criticised narrow skill classifications which result in increased down-time and slower responses to new circumstances.[17]

4.15 The Victorian Government mentioned a number of features which appear to reflect structural problems in the education and training systems - a great excess of demand over places available in tertiary education; the restriction of apprenticeships to traditional trades; and the lack of 'opportunity for training, upgrading or updating of skills among adults.'[18] The Victorian Government advocated greater employer and union co-operation in tackling the skills base problem and the discussion of training initiatives during the review of the wages agreement. They saw a need for particular attention to be given to areas such as: upgrading employees' skills to cope with technological change; more broadly-based training of apprentices; greater flexibility in training methods and eligibility for apprenticeships; greater retention of skilled staff by addressing pay and conditions, career paths and job security; and the encouragement of greater

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15. State Bank/Australian Chamber of Manufacturers: *Survey of Manufacturing Conditions and Future Prospects in NSW*, June quarter 1988, p.10.
16. Evidence, p.116.
17. Evidence, p.514.
18. Evidence, p.414H.

private sector training expenditure combined with an integration of public and private sector training initiatives.[19] Other key issues identified in the Victorian Government submission to be addressed were:

> ... whether a non-apprenticeship based form of training is required in the skilled trades to supplement the numbers in apprentice training and to what extent the cost of the investment in training should be borne by employers, either by directly providing the training or by contributing to the cost of providing appropriate training in post secondary educational institutions.[20]

4.16 The Victorian Government suggested that the Federal Government should play a greater role in financing training and re-training, for example by providing training allowances for trainees in areas of skill shortages, or offering 'dollar for dollar' subsidies to increase the effect of employers' contributions.[21]

4.17 The Metal Trades Industry Association (MTIA), in conjunction with the metals trades unions, has proposed a three stage plan commencing with a new Metal and Engineering Industry Award providing for multi-skilling, adult apprenticeships, and employer responsibility for training.[22] The MTIA, in conjunction with the Federal Government, agreed to establish a project team to investigate and recommend solutions to training and career development problems in the industry. The Commonwealth will contribute $400,000 per year for the next three years, while the MTIA will provide $100,000 per year. The findings of this project will allow a training program to be designed and effective career paths to be established within the single award structure.[23]

4.18 Investment in training is a long term investment and long term investments are unpopular with financial managers looking for quick returns. There is also the 'free-rider' problem with firms being reluctant to spend money training staff who may

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19. Evidence, pp.414H & 414I.
20. Evidence, p.414I.
21. Ibid.
22. Evidence, pp.659-663.
23. Evidence, p.665.

then be 'poached' by another employer who has not had to contribute to their training but reaps the return. As one suggestion to address these problems, the ACTU has proposed a national training fund, with contributions coming from the private sector - the actual form of the fund and the way it would operate to be settled after negotiation.[24] The adequacy of training for management was another issue often raised. The ACTU saw a 'crying need for improved management training' particularly in the area of interpersonal skills.[25]

4.19 The existing apprenticeship system was considered inadequate by some witnesses. In the same way as training costs are cut in difficult times, one of the problems with the apprenticeship system has been that expenditure has been a cost cut during difficult macro-economic conditions. This is exemplified in the low number of apprenticeship intakes during the recession in 1982.[26] Accreditation of training from one trade to another or wider training applicable to a whole industry are *matters which warrant further examination. Also, apprenticeships* are often considered a once-and-for-all affair. Consequently, adult training and retraining is often neglected and little attention paid to the upgrading and updating of labour force skills. The Committee considers that the current apprenticeship scheme is too age-related. It is essential that alternatives to the current scheme be examined.

4.20 Gippsland Group Training told the committee that the apprenticeship scheme requires 're-vamping' as well as incorporating industry and union requirements for multi-skilling. Many trades have been displaced or deskilled by technological change, yet most trade indentures run for 4 years whether still necessary or not. Many small businesses do not have adequate employment or training facilities for even 12 month apprenticeships.[27]

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24. Evidence, p.498.
25. Evidence, p.508.
26. Evidence, p.503.
27. Evidence, pp.547 & 552.

4.21 A statement released by the Minister for Employment, Education and Training, in conjunction with the 25 May 1988 Economic Statement, acknowledges the need to improve education and training to enable structural adjustment in the economy to occur and to enable Australian industry to become and remain internationally competitive.[28] The Minister's statement covers many of the issues and problems raised before the Committee in evidence and indicates the response the Government intends to make. It is, therefore, worth outlining some of its main features.

4.22 A task force is to be established and its report later this year used to stimulate wide-ranging discussion of these important issues. The establishment of an Office of Labour Market Adjustment to monitor structural change and its impact was also announced. Existing programs 'of retraining, wage subsidy and relocation assistance' will be focused on areas of major need.

4.23 The Minister emphasised the importance of industry increasing its financial contribution to, and its involvement in, the training system. It was also made clear that the Government does not intend substantially increasing its own expenditure in the education and training area. Policy changes will be achieved by 'a redirection of funds'.[29] Increases in training expenditure are expected to be met by those who are 'the prime beneficiaries of restructured training'.[30] That is, negotiations for restructuring awards, which involve the need for improved skill training, should cover the question of the additional funding which will be required.

4.24 The Minister indicated that Commonwealth assistance to industry through its various training programs will increasingly be provided 'in return for increased and ongoing industry investment in and commitment to training'.[31] Increased efforts

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28. Minister for Employment, Education and Training: *A Changing Workforce*, AGPS 1988.
29. Ibid, p.4.
30. Ibid, p.7.
31. Ibid, p.24.

from industry will be expected particularly in further education and training, as opposed to entry-level training. The Government intends to monitor how successful industry is at making its own arrangements for increased training expenditure during 'the next 12 to 18 months' before deciding whether legislation is required to establish private training funds.[32]

4.25 The Government has already taken measures to increase industry involvement in technical and further education under the TAFE Infrastructure Program, which came into effect from 1 January 1988. Capital grants are directed to 'priority areas of skill shortage or strategic importance' and a 'portion of equipment funds is only available when matched by industry contributions'.[33]

D. Conclusions on education and training

4.26 Co-operation between unions and management in developing a better organisation of work is essential. Development of more satisfying career paths with access to continuing education and skills upgrading, and enhancement of job satisfaction which multi-skilling can provide, will improve industrial relations and help retain skilled workers within industry. Statements by both employer and union organisations give encouragement that better co-operation can be developed.

4.27 While recognising industry's low level of contribution to skills training, the committee was not able to determine on the evidence presented the reasons for this. It may be owing to lack of incentives, the perceived high levels of youth wages or attitudinal problems. A process of negotiation, such as has been carried out in the metal trades industry, is the preferred approach to improve the level of training, increase industry funding and restructure jobs. The committee supports the establishment of a task force by the Government to investigate education and skills training reform. The committee recommends

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32. Ibid, p.28.
33. Ibid, p.8.

that the task force also report on alternative forms of industry training funds which might be established so that, if appropriate levels of funding are not reached within 12 months of the task force report being presented to the Government, further action might be taken to achieve those levels.

The committee further **recommends**

that the task force specifically examine the apprenticeship system and its reform.

The committee proposes to reconsider investment in education and skills training when the report of the task force has been completed.

E. Expenditure on research and development - recent history

4.28 It is only comparatively recently that the statistical tools necessary for objective analysis of the research and development effort in Australia have begun to be developed. The Department of Science and Education conducted the first comprehensive study of Australian commitment to research and development in the natural and social sciences in 1968-69. The study was called *Project SCORE (Survey and Comparisons of Research Expenditures)* and was repeated by the Department of Science and its successors, in conjunction with the Australian Bureau of Statistics, in 1973-74 and 1976-77. The ABS assumed total responsibility for conducting the survey for 1978-79 and subsequent surveys, with the role of the Department of Science being to comment on the results.

4.29 The second half of the 1970s saw several other studies commenting on the research and development effort. A White Paper on Manufacturing Industry, tabled by the Government in May 1977, stated that the ratio of government R&D expenditure to private sector expenditure in 1973-74 had been two to one.[34] The *Birch*

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34. White Paper on Manufacturing Industry, AGPS, May 1977, p.26.

Report, or the report of the *Independent Inquiry into the Commonwealth Scientific and Industrial Research Organisation (CSIRO)*, in August 1977 remarked that:

> The overwhelming impression of R&D effort by manufacturing firms in Australia is that it is carried out by only a few firms and then, in many cases, only on a small scale. Much of what is called R&D is little more than 'trouble-shooting' or adaptations of known methods.[35]

4.30 The Australian Science and Technology Council (ASTEC) made similar comments in its report to Parliament in September 1978, blaming the small size of most of our manufacturing firms and inadequate government incentives for a declining industrial R&D incentive.[36]

4.31 The June 1979 report of the inquiry by the Senate Standing Committee on Science and Environment into industrial research and development in Australia noted a decline in the role of the business enterprise sector between 1973-74 and 1976-77. Whereas business had contributed 34 per cent of R&D funds and 35 per cent of R&D performance in 1973-74, by 1976-77 it provided only 18 per cent of funds and 19.3 per cent of performance.[37] The Senate committee added that:

> Most R&D expenditure by the larger foreign-controlled enterprises in 1973-74 was on experimental development (72%), perhaps indicating that such enterprises tend to direct more effort to adapting overseas products to suit local markets than to innovation, although the larger foreign-controlled enterprises did also devote 11% of their R&D funds towards basic research. Of the royalty payments and payments for technical know-how by the Business Enterprise sector in 1973-74, 94% was paid overseas - more than half to related foreign enterprises. These figures support the evidence ...

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35. Independent Inquiry into the Commonwealth Scientific and Industrial Research Organisation, Report, AGPS, Canberra, 1978, p.128.
36. Australian Science and Technology Council, *Science and Technology in Australia 1977-78*, Volume 1A, pp.93 & 97.
37. Senate Standing Committee on Science and the Environment, *Industrial Research and Development in Australia*, AGPS, Canberra, 1979, pp.56-58.

that a considerable part of Australian technology is derived from overseas.[38]

4.32 ASTEC reported again in November 1985 on public sector involvement in R&D. The report mentioned the vital need to increase the export performance of manufacturing industries, which would require 'a substantial increase in innovation, and therefore in the performance of industrial research and development'.[39] The ASTEC report also stated that Australia's performance of R&D compared quite unfavourably 'with other medium-sized developed countries with similar social and political structures'.[40] OECD statistics show that Australia's gross expenditure on R&D as a percentage of gross domestic product (GDP) was below that of the United States, Japan, West Germany, Sweden, the UK, France and the OECD average throughout the 1970 to 1983 period. At the end of that period the OECD average figure was in excess of 2 per cent and rising whereas Australia's was less than 1 per cent and falling.[41] Furthermore, the ratio of R&D expenditure to more traditional capital investment was far lower in Australia than in any of the above countries for most of the same time period and the divergence generally increasing.[42]

4.33 A report by the Department of Industry, Technology and Commerce (DITAC) in November 1987 on Australian science and technology indicators also drew attention to the low level of our national R&D expenditure, resulting from the very small contribution in international terms of the Australian business enterprise sector.[43] The decrease between 1968-69 and 1981-82 in the share of the business sector in total R&D expenditure is

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38. Ibid, p.58.
39. Australian Science and Technology Council, *Public Investment in Research and Development in Australia*, AGPS, Canberra, 1985, p.1.
40. Ibid.
41. Bureau of Industry Economics: *Studies in industrial development and innovation policy*, Paper 1: *Introduction and General Overview*, AGPS, 1987 p.32.
42. Ibid, p.34.
43. Department of Industry, Technology and Commerce, *Measures of Science and Innovation: Australian Science and Technology Indicators Report 1987*, Canberra, 1987, p.11.

described in the DITAC report as 'a strong indication of a process of de-industrialisation, as business turned away from investing in its own future through product and process development'.[44] In real terms, business enterprise expenditure in 1981-82 was little more than half what it was in 1973-74.[45]

4.34 The large comparative role of the government sector was said to have resulted in 'a heavy predominance of basic research and relatively little experimental development'. Australian science was described as 'high quality, but marginal to the economic system, locked into a 'separate matrix' to that of application and productive capacity'.[46] The relative proportions of R&D funds provided by the business and public sectors in Australia is markedly different from the United States, Japan, West Germany, Sweden, the United Kingdom, Canada and France. By 1983 the contribution of the business sector in the first four other countries listed exceeded that of the public sector. Canada, with 38.6 per cent business funds and 52.2 per cent public funds, was the closest of the remaining three countries to the Australian pattern of 20.3 per cent business funds and 76.7 per cent public funds.[47]

4.35 A positive note in the DITAC report was that the business enterprise sector substantially increased its performance of R&D between 1981-82 and 1984-85 and again in 1985-86.[48] Speculation concerning the reasons for the increase shown in the 1984-85 figures suggests: increased media coverage of science and technology issues; increased optimism about the economy; anticipation of the 150 per cent R&D tax incentive introduced in 1985/86; and Federal Government moves to help establish a venture capital market.[49] Preliminary figures on R&D expenditure by business enterprises in 1986-87 show a 12 per cent

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44. Ibid, p.4.
45. Ibid, p.25.
46. Ibid, pp.4 & 5.
47. BIE: *Studies in industrial development and innovation policy*, Paper 1 p.35.
48. DITAC: *Measures of Science and Innovation*, p.25.
49. Ibid, pp.32 & 33.

increase, in average 1979-80 prices, over the previous year.[50] That increase undoubtedly owes much to the 150 per cent tax incentive introduced from 1 July 1985 which will run until 30 June 1991. To put these increases in perspective, however, there is a need to bear in mind the low base level from which they start and the certainty that expenditure levels overseas also have increased.

4.36 So far this report has referred to business enterprise R&D expenditure rather than specifically to the manufacturing sector. Manufacturing accounted for 88 per cent of business enterprise R&D expenditure in 1984-85. This is calculated from figures attributing expenditure to industries according to the product area for which the R&D is carried out rather than according to the industry category of the individual firms' major industrial activity.[51] Four manufacturing areas - electronics, computing and electrical appliances; transport equipment; chemical, petroleum and coal products; and industrial machinery and equipment - accounted for two-thirds of business enterprise R&D.[52]

4.37 Countries differ quite widely in the pattern of distribution of public R&D funds between the different sectors which actually perform R&D. In Australia, as in Sweden and Japan, the business sector provides the great bulk of the funds it uses to carry out R&D in its own sector.[53] Consequently, the bulk of funding for manufacturing R&D in Australia comes from the business sector - ignoring the effective subsidy of the 150 per cent tax deduction in recent years.

4.38 Expenditure in 1981 on R&D as a percentage of production in the Australian manufacturing sector compared quite badly with corresponding figures in the USA, Japan, Germany, the United

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50. ABS: *Research and Experimental Development, Business Enterprises, Australia*, Preliminary Catalogue No. 8105.0, 18 April 1988.
51. DITAC: *Measures of Science and Innovation*, p.34.
52. Ibid, p.39.
53. BIE: *Studies in Industrial Development and Innovation Policy*, Paper 1, AGPS 1987, p.35.

Kingdom, France, Sweden, Canada and Italy. This was true in the high, medium and low technology areas and for almost all of the individual industries within each of those areas. Even with the improvement in R&D expenditure in 1984-85, Australia still compared badly in most manufacturing industries with the 1981 OECD median level.[54]

F. Attitudes of management

4.39 Surveys conducted in 1982 and 1984 revealed a problem in the attitudes of Australian business management. The fact that Australia's industries were technologically behind those of its competitors was recognised but the apparent reaction was one of complacency.[55] A further study in 1984 indicated a correlation between internal R&D activity and an inclination on the part of firms to introduce new products or processes or to be involved in international markets.[56] In other words it was important to have an internal R&D involvement rather than simply purchasing externally developed technology. An involvement in R&D also places a firm in a better position to assess which of the overseas technology to purchase. The DITAC report referred to a 1985 survey which found that Australian business executives when compared with the Japanese were more interested in R&D as a road to lower production costs than to developing new or improved products or expanding markets.[57]

G. Government assistance for R&D

4.40 The major current form of assistance from the Commonwealth Government for R&D in the manufacturing sector is the 150 per cent tax incentive introduced from 1 July 1985 to run until 30 June 1991. As announced in the May 1988 Economic

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54. DITAC: *Measures of Science and Innovation*, pp.39-46.
55. Studies by R. Johnston et al for the New South Wales Science and Technology Council, Nov. 1982; and PA Technology, May 1984 quoted in DITAC: *Measures of Science and Innovation*, p.26.
56. Survey by Price Waterhouse quoted in DITAC: *Measures of Science and Innovation*, p.27.
57. Survey by PA Technology quoted in DITAC: *Measures of Science and Innovation*, p.26.

Statement, from 1 July 1991 R&D expenditure will then be deductible at 100 per cent, which will still be more favourable than the pre-1985 arrangement. The other major assistance mechanism is the Grants for Industry Research and Development (GIRD) Scheme, which replaced the Australian Industrial Research and Development Incentives Scheme (AIRDIS) from 1 July 1986. In 1986-87, the 150 per cent tax incentive was estimated to cost $105 million in revenue forgone, while the GIRD scheme cost $11.2 million and almost $38 million was provided for commitments under the terminated AIRDIS.[58]

4.41 The full tax incentive is provided to companies spending $50,000 or more in a year on R&D. A reduced incentive applies for expenditure between $20,000 and $50,000. The GIRD Scheme is three pronged. It provides: discretionary grants, which mainly assist small firms unable to take full advantage of the tax incentive; generic technology grants, assisting technologies which will emerge as industries of the future; and the possibility of assistance for projects of national benefit which would not be commercially feasible otherwise.[59]

4.42 The submission from the Industry Research and Development Board (IRDB) indicated that the tax incentive scheme has so far produced disappointing results with 'about nine in ten companies which are eligible ... not using the concession'.[60] Possible reasons given for the response being less than expected were: fear that government policy on the incentive would change; fear that the Australian Tax Office in examining claims would discover previous indiscretions; and a lack of information.[61] The IRDB pointed out that certain business organisations, such as unincorporated businesses, were ineligible for the tax concession and suggested that R&D expenditures could be treated as 'normal items of business expenditure'.[62]

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58. Industry Research and Development Board Annual Report 1986-87, pp.21 & 22.
59. Ibid, pp.18-21.
60. IRDB Submission, p.2.
61. Ibid.
62. Ibid, p.3.

H. Conclusions on research and development

4.43 The level of business investment in R&D has risen in recent years from an extremely low base. This has clearly been encouraged by the generous 150 per cent tax incentive scheme. It is still too early to tell whether business leaders are coming to realise the benefits that might flow from R&D expenditure quite apart from tax concessions. There does appear to be an attitudinal problem which could be deeply entrenched. The Government has announced that the deduction will be reduced to 100 per cent from 1 July 1991. The Committee recommends

> **that the tax incentive scheme for R&D expenditure not be further altered for at least five years from that date to ensure stability and predictability for business in making its investment plans.**

CHAPTER 5

POLICY OPTIONS TO IMPROVE INVESTMENT PERFORMANCE

A. Introduction

5.1 Given the broad range of factors identified as influencing investment behaviour and the complex interactions that are part of the economic system, it was not surprising that the committee received suggestions for action in numerous areas. Broadly, there was agreement that the Government should try to ensure that the general economic environment was conducive to investment. It was also commonly suggested that the Government as far as possible should remove impediments to investment, either created by government policies or existing as distortions within the economic system. There was a diversity of comments concerning whether the Government should provide positive incentives to industry and precisely what form such incentives should take.

5.2 The suggestions concerning the macroeconomic environment encompassed such matters as inflation, the exchange rate and interest rates, and the impact of the Government's monetary and fiscal policies. The Government's policies on industrial relations and wage increases could also be considered as coming within this broad general heading. The main perceived impediments to investment created by the Government were taxes and charges of various kinds and excessive regulation of business activity. Areas where it was suggested the Government could take positive measures to encourage business include: investment and depreciation allowances; research and development incentives; assistance in skills development and other training; assistance in the provision of information about opportunities for exports; and by the use of the Government's purchasing power. Apart from training and research and development which are dealt with in

Chapter 4, these matters are considered in the rest of this Chapter.

B. The broad economic environment

5.3 The committee heard the views of representatives from industry, labour and government, as well as those of more independent observers such as the Bureau of Industry Economics. Many of those views were, not surprisingly, contradictory but there was general agreement that government policies needed to be predictable and stable over a long period. They should be clearly communicated, preferably after consultation with groups which might be affected. This would minimise one area of uncertainty within the business community and be conducive to investment.

5.4 Beyond this point, opinions began to diverge. While most were of the view that the Government should set policies which 'get the fundamentals right', there was disagreement over how much further the Government should intrude. Broadly representative of those who favoured minimal government intervention were the Confederation of Australian Industry and the Business Council of Australia. Their attitude was that government should allow market forces to operate within a stable, internationally competitive macroeconomic framework, and not seek to interfere in the investment and production decisions of business. Others, such as the Australian Council of Trade Unions (ACTU) and the Australian Chamber of Manufactures (ACM), considered that market failure could require government intervention to a greater or lesser extent.

5.5 The Australian Industry Development Corporation (AIDC) pointed out that there is a growing tendency for international influences to limit the scope for independent national economic policy action. This is particularly true in relation to the effect of the deregulation of financial markets on monetary

policy, although international factors will increasingly influence fiscal and taxation policies as well.[1]

B.1 Exchange rate policy

5.6 The exchange rate clearly has a considerable impact upon Australia's ability to compete in international trade and it is largely decided in international markets. Those who made submissions to the inquiry were in general agreement that a floating exchange rate which reflected 'the economic fundamentals of the economy' was the best policy to adopt.

5.7 The New South Wales Government was of the opinion that the exchange rate was 'not an area amenable to government action.'[2] The Victorian Government believed that stability in the exchange rate was desirable, without actually advocating active management.[3] The Metal Trades Industry Association (MTIA) saw no place for the authorities trading in foreign exchange 'except to smooth out day by day fluctuations'.[4]

5.8 The basic objections to the Government attempting to control the exchange rate are: that the market place is ultimately the best judge of the currency's correct value; it is in any case a futile task in the long run, which may cause more damage than good; and manipulating the exchange rate will interfere in interest rates finding their 'true' level. The Bureau of Industry Economics (BIE) advised that the judgement behind the decision to float our currency was that interest rate volatility has a more adverse impact on the economy as a whole than exchange rate volatility. The possibility, however, that manufacturers may be more affected by exchange rate movements than commodity producers was also acknowledged.[5]

5.9 The committee accepts that the value of the currency should ultimately reflect the fundamental health of the economy

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1. Evidence, p.235.
2. Evidence, p.115.
3. Evidence, p.407.
4. Evidence, p.670.
5. Evidence, p.945.

as assessed by the market place. In practice, however, the market evaluation can be fairly volatile and depend on movements in the value of currencies internationally more significant than our own. Some limited intervention in the market by the Reserve Bank is therefore justified from time to time to increase stability. The limits of that intervention can not usefully be prescribed as a result of this inquiry.

B.2 Fiscal and monetary policy

5.10 A main feature in the economic debate in Australia in recent years has been the strength of the calls for a tightening of the Government's fiscal policy. Those calls were repeated in submissions to the inquiry. The Australian Chamber of Manufactures (ACM) recommended 'a continued contraction in fiscal policy ... geared towards increasing the budget surplus as far as possible.'[6] Desired results of that contraction include: increased scope for cuts in taxation rates; reduction of public sector borrowings, with consequent falls in interest rates; and reduced reliance on overseas capital, with benefits for the level of foreign debt.

5.11 A number of submissions commented that a slack fiscal policy in the past had gone hand in hand with an excessive reliance on monetary policy to regulate domestic demand. This had resulted in high interest rates, adding to business costs and discouraging investment. The Australian Chamber of Manufactures, in a recommendation complementary to its suggestion for a tight fiscal policy, called for a monetary policy which allowed a further easing in interest rates 'to lessen the contractionary effects of the fiscal constraint.'[7]

5.12 The Australian Council of Trade Unions (ACTU) offered the contrary view that it did 'not believe that simplistic ad hoc cuts to government spending will improve investment outcomes.'[8] The ACTU argued that there was 'little evidence that government

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6. Evidence, p.51.
7. Ibid.
8. Evidence, p.449.

expenditure {had} been crowding out private investment;' the 'linkage between decreases in government spending ... and lower interest rates' was in any case a 'loose' one; and investment levels were not strongly responsive to changes in interest rates, particularly by comparison with the effect of other determinants such as demand and profit expectations.[9]

5.13 Calls for reduction in government expenditure are often motivated by a view that many of the activities in which governments have become involved are activities more appropriately carried out by the private sector. The committee does not wish to comment on this privatisation debate. The committee's concern in this report is simply with the issue of whether continuous cuts in government expenditure are warranted by any possible increase that might result in manufacturing investment. The committee does not consider that that single ground is sufficient to justify a process of further fiscal contraction although the elimination of the budget deficit in the last Commonwealth Budget and the anticipated surplus of $3 billion next financial year are beneficial achievements.

B.3 Interest rates policy

5.14 As mentioned above, one of the principal aims of the fiscal and monetary policies recommended by the majority of those making submissions to the inquiry was to reduce interest rates. Real after tax interest rates are an important consideration by business in making investment decisions. Despite the 'integration of the major fixed-interest markets' of the world, pointed out by the Australian Industry Development Corporation (AIDC),[10] government policies can still have some impact on real after tax interest rates.

5.15 As the Australian Mining Industry Council (AMIC) put it, real after tax interest rates depend not only on real interest rates overseas which are beyond our control, but on the expected

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9. Evidence, p.450.
10. Evidence, p.235.

real rate of depreciation of the Australian dollar and rates of tax on profits.[11] The most certain means of affecting real after tax interest rates is clearly by altering the tax rates, and taxation policy is dealt with separately. Another means is by altering the growth of money supply.

5.16 The Bureau of Industry Economics perceived dangers in government exercising its 'imperfect control over interest rates through monetary and fiscal policy'. Its argument was that:

> ... there have already been substantial reductions in interest rates, and ... the scope for further reductions is probably limited. Further, reductions in interest rates directly affect aggregate demand, with the possibility of intensifying import demand and adversely affecting the current account deficit. It is also likely that in the presence of an already large external debt, lowered interest rates would occasion an incipient capital outflow and a further depreciation of the Australian dollar. This would further raise difficulties in servicing debt denominated in foreign currencies.[12]

The other side of the interest rate argument, of course, is that the use of monetary policy to raise interest rates for the purpose of dampening domestic demand could lead to an appreciation of the Australian dollar and a loss of competitiveness for Australian exports.

5.17 Any manipulation of money supply growth must be based on a very careful analysis of the growth rate of the economy. The possible stimulatory effects on domestic demand are very significant in our present economic position. The committee, therefore, does not advocate the use of monetary policy in isolation to lower interest rates. The impact of fiscal restraint must be closely monitored to see what scope exists to lower interest rates. For the longer term, the lowering of inflationary expectations should help bring down interest rates in a more sustainable manner.

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11. AMIC Submission, p.2.
12. Evidence, pp.869 & 870.

B.4 Inflation Policy

5.18 Apart from the adverse impact of inflation on nominal interest rates, it affects business confidence[13] and makes our exports less price competitive. It is clearly important that the Government keep in mind the need to further reduce our inflation rate. Submissions to the inquiry mentioned this need without suggesting any radically new means of achieving it.

5.19 The factors that have to be borne in mind in treating inflation are the fairly obvious ones of containing additions to the costs of production - especially labour costs - and ensuring that an excess of demand over supply does not occur. Real wage increases have been largely contained in recent years, although this is an area which allows for no complacency. Domestic demand has been fairly subdued and restraint in government spending should assist in keeping demand down.

5.20 The principal task must be to ensure that there is no explosion in wages. This can only be achieved through continuing negotiations between the union movement, industry and the government based on an understanding of the national importance of dampening down the inflation cycle. The committee does not make any specific recommendations for alterations to the formal processes of negotiation, arbitration or conciliation.

B.5 Industry Protection

5.21 A high proportion of submissions stressed the importance to investment performance of providing a stable and predictable framework of government policy. This is particularly true in the area of industry protection. While the government has made clear its general intention to reduce protection levels, it is important that this be done in such a way as to provide a predictable framework for investment decisions over a number of years.

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13. Evidence, p.372.

5.22 Protection policy needs to be supported by credible and effective measures against dumping of product on Australian markets. The threat of dumping significantly increases the riskiness of major investment decisions in some areas of manufacturing, such as chemicals.

C. Removing the impediments

C.1 Government regulation

5.23 The impact of government regulations on business activity - adding to costs and causing lengthy delays and much frustration - was a subject which was widely mentioned in submissions to the inquiry. Part of the problem is the existence of three layers of government, each with its own requirements and too little co-ordination between them. Even at just the State level, however, there is too often a need for businesses to approach a large number of different departments to obtain approvals for different aspects of one proposed undertaking. There appears to be good reason to suspect that the existence of extensive regulation requirements not only disrupts business activity but reduces the level of investment.

5.24 The Victorian and New South Wales Governments[14] suggested a number of areas which warrant investigation. These include: government bodies such as the National Companies and Securities Commission and the Foreign Investment Review Board; the communication and transport areas (especially freight, shipping and port activities); and the effect on key industries.

5.25 Measures suggested to help solve the problems caused by government regulation include: greater uniformity between States; the elimination of outdated regulations; the rewriting of existing regulations in more intelligible language; the inclusion of sunset clauses in new regulations, so that their retention will have to be consciously reviewed; greater co-ordination

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14. Evidence, pp.414B, 414C and 117.

between State regulating agencies, with the possible creation of 'one-stop shops' for several required approvals; the prior publication of cost benefit analyses; and a prior public exposure and consultation process. Many of these measures are being examined already by the Commonwealth and State Governments and the committee urges that this review process be given a high priority.

C.2 Taxes and charges and the depreciation allowance

5.26 The matters covered under this heading include perceived impediments to investment as well as an existing incentive, the depreciation allowance, since both the impediments and the incentive are concerned with the operation of the taxation system. It was also suggested that the cost of reducing certain of the impediments, such as the burden of corporate income taxes, could be recouped by eliminating the depreciation allowance.

5.27 Many criticisms are made of the taxation system. It is alleged, for example, that it imposes an unreasonable burden on companies owing to excessively high corporate tax rates. It is also claimed that relying heavily on income taxes to raise government revenue, as is the case in Australia, acts as a bias against saving and towards present consumption. That provides part of the justification, it is said, for introducing a broad-based consumption tax and reducing both corporate and personal income tax rates.

5.28 Studies released this year by the Treasury[15] and the BIE[16] pointed out that international comparisons of statutory corporate tax rates are unreliable measures of the relative corporate tax burdens applying in different countries. The burden imposed at the corporate level can also be an inaccurate indication of the burden on income finally received in individual

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15. Treasury Economic Paper No. 13: *International Comparisons of Business Taxation*, AGPS, 1988.
16. BIE: Business Income Taxation Paper 3: *The Taxation of Corporate Investment Income: Australia's Place in the World*, BIE 1988.

shareholders hands.[17] Matters which must be taken into account, in addition to the statutory company tax rate, include: deductions from taxable income, such as interest payments, investment allowances, and depreciation allowances; personal tax provisions, applying to income from dividends, interest and capital gains from corporate investments; imputation provisions; withholding taxes and foreign tax credit schemes; different inflation rates; the types of assets in which investment is made and whether debt or equity financing is used.[18]

5.29 Account should also be taken of the impact of taxes levied at other than the national level, such as State or local taxes, and the impact of social security levies or payroll taxes which are not defined as corporate taxes.[19] Differences of a non-tax nature between countries may also encourage or discourage incorporation affecting the apparent total corporate tax burden as a proportion of GDP.[20]

5.30 The Treasury and the BIE studies pointed out that the total tax burden in Australia, as a percentage of GDP, has been low by comparison with most OECD countries. The apparently higher corporate tax burden in Australia, pre 25 May 1988, which was particularly commented upon following the lowering of corporate tax rates in the UK, the USA and New Zealand, cannot simply be taken at face value. Both studies concluded that there is no summary indicator which enables a valid international comparison of the aggregate corporate tax burden. The Treasury, however, considered that once account was taken of 'income tax at lower levels of government and on distributions' then Australian business would not be found to be highly taxed in comparison 'with our major (developed country) trading partners'.[21]

5.31 The BIE drew particular attention to the wide variation in effective corporate tax rates depending on the type of asset, the source of finance and the rate of inflation. The BIE study

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17. Treasury Economic Paper No. 13, p.1.
18. BIE: Business Income Taxation Paper 3, pp xii, xiii and xv.
19. Treasury Economic Paper No. 13, p.22 & p.5.
20. Ibid, p.5.
21. Ibid, p.22.

stated that 'in 1987, Australia had a relatively high effective tax rate with respect to company level taxes and allowances applying to equity investment'; although if account were taken of effective rates at both the company and shareholder levels and if 50 to 75 per cent of dividends were franked then 'Australia's tax rate ranking appears to be close to the average'.[22] Further conclusions in the BIE study were that: 'a debt-financed investment is taxed relatively lightly in Australia in comparison with other Western countries'[23]; and Australia moved closer, between 1983-84 and 1987, to equal tax treatment of domestic and foreign source income but significant deviations from such equal treatment still remained.[24]

5.32 Quite apart from the need to be internationally competitive in the tax burden imposed on business there is the need to remove many of the biases within our tax system which favour certain kinds of activities over others. The BIE study calculated the disaggregated effective tax rate in Australia for different types of assets (machinery, buildings and inventories) for different industries (manufacturing, other, and commerce) for different sources of financing (debt, new share issues, retained earnings) and for different owners (households, tax-exempts and insurance companies). The effective tax rates were calculated for all of the above for 50, 75 and 100 per cent franking of dividends and with or without the issue of franked bonus shares to avoid real capital gains liability. The figures indicated a strong bias towards debt financed investments in Australia - in fact, a subsidy of about 12 per cent as calculated before the May 1988 Economic Statement.[25] That bias arises because of the difference between the company tax rate against which interest payments can be deducted and the lower tax rate on the interest received as well as the impact of inflation on nominal interest rates. At zero per cent inflation it was estimated that the effective tax rate would be 5 per cent rather than a subsidy.[26] The effective tax rate on equity financed investments, by

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22. BIE: Business Income Tax Paper 3, p.xxiv.
23. Ibid, p.xix.
24. Ibid, p.xxi.
25. Ibid, p.89.
26. Ibid, p.91.

contrast, rises as inflation increases, although if the percentage of franked dividends increased to 100, the effective tax rate would fall.[27] The high level of debt financing in Australia, and the adverse consequences which have been noted elsewhere in this report, obviously owes much to the existence of this bias.

5.33 Quite substantial differences appear to exist between the effective tax rates applying to the returns on investment in machinery, buildings and inventories. The BIE study indicates that machinery investment incurs a very low effective tax rate - one of the lowest in world terms. The effective tax rates are higher for buildings and higher still for inventories investments.[28] Similar conclusions were drawn in a study carried out by the Centre of Policy Studies although buildings were taxed more than inventories according to their calculations.[29] Owing to the differences between the types of assets in which investments are chiefly made and the different forms of finance used, there are resulting biases in the tax system between different industries.

5.34 The Centre of Policy Studies study identified the fact that the effect of inflation is not taken into account in calculating taxable income or in historical cost measures for the purposes of depreciation and measuring stock holdings as a major cause of the biases.[30] The Centre advocated that the whole tax system be reformed to take account of inflation, including current replacement prices and effective asset lives for depreciation deductions and automatic indexation of tax schedules.[31]

5.35 The BIE submission pointed out the means by which a reduction in corporate income tax rates could encourage investment. Companies would have more internal funds available

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27. Ibid, p.93.
28. Ibid, p.91.
29. Freebairn, J.; Porter, M.; Walsh, C.(Edit): *Spending and Taxing II: Taking Stock*, Allen & Unwin, March 1988, pp.74-77.
30. Ibid, p.71.
31. Ibid, pp.77 & 78.

for investment and the cost of capital would be reduced. Foreign investors would no longer be discouraged from investing in Australia by our higher income tax rates.[32] The BIE also pointed out that a reduction in corporate income tax rates would apply to all sectors of the economy avoiding the introduction of distortions, which more specific investment allowances would do.

5.36 The BIE advocated that part of the revenue loss from reducing the corporate income tax rate should be recovered by eliminating the existing accelerated depreciation allowance.[33] This would remove an advantage that the manufacturing sector presently has in relation to other sectors, as well as a bias towards plant and equipment investment over buildings and structures and a bias towards industries with longer life assets.[34] In any case, the BIE argued, part of the rationale for the accelerated depreciation allowance - namely, a reduction in the bias introduced by inflation - was disappearing as the inflation rate in Australia falls.[35]

5.37 The Australian Council of Trade Unions (ACTU), on the other hand, saw the 'bias' in the accelerated depreciation allowance towards those who actually invested as an argument in its favour. Reductions in the corporate tax rate would benefit all companies whether they invested more or not.[36] The Australian Manufacturing Council (AMC) also expressed concern about any possible removal of the depreciation provisions on the grounds that this could lead to a shift in investment towards less capital intensive areas.[37] The Metal Trades Industry Association (MTIA) claimed that to compensate companies for the removal of the depreciation allowance would require a reduction in the corporate income tax rate to 25 per cent, which they considered unlikely.[38] The Australian Chamber of Manufactures (ACM) considered that the depreciation allowance should not be removed

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32. Evidence, p.865.
33. Evidence, p.870.
34. Evidence, p 867.
35. Evidence, p.866.
36. Evidence, pp.446 & 447.
37. Evidence, p.609.
38. Evidence, p.682.

unless the taxation system was adjusted for inflation.[39] The administrative difficulties which appear to inevitably result from all present suggestions for inflation adjustment, however, are so substantial according to the BIE that they should not be introduced.[40]

5.38 The MTIA,[41] the AMC[42] and the ACM[43] all indicated support for a broad-based consumption tax which would provide another means of financing a reduction in the corporate tax rate. The BIE lent some support to the idea of altering the tax mix, away from such a heavy reliance on income rather than expenditure. A heavy reliance on income taxes discourages domestic savings - for example, by taxing receipt of nominal interest payments - and this leads to greater borrowings from overseas savings, aggravating Australia's foreign debt problems.[44]

5.39 The May 1988 Economic Statement announced a reduction in the company tax rate from 49 to 39 per cent starting in 1988-89. At the same time a number of concessions are to be removed or reduced to make the total eventual effect revenue neutral. The accelerated depreciation rates for plant are to be replaced by rates determined according to the effective life of the plant plus a 20 per cent loading. These measures will help decrease the distortions which previously existed in the tax system. However, as pointed out in the BIE submission, this package of changes will raise the user cost of capital applying to plant and equipment. Assuming firms utilise conventional forms of financial calculation, this would reduce the incentive to invest in plant and equipment, particularly in sectors where equipment has a long economic life such as much manufacturing and mining. The removal of the tax exemption for the gold mining industry from 1 January 1991 will further assist in 'levelling the tax playing field'.

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39. Evidence, p.54.
40. Evidence, p.869.
41. Evidence, p.655.
42. Evidence, p.616.
43. Evidence, p.51.
44. Evidence, pp.862 & 863.

5.40 It is interesting to note that the June quarter 1988 survey by the State Bank and the ACM indicated that the great majority of the NSW manufacturing firms surveyed did not expect to alter their plans over the next two years to expand or modernise their plant and equipment or buildings as a result of the changes to depreciation allowances and corporate tax rates. It will be important to see whether this relatively optimistic outlook is vindicated by actual investment performance, given the BIE's assessment of the effect of the tax changes referred to in the above paragraph. A majority of the firms, albeit a smaller majority, also did not expect the announced tariff rate reductions - to 10 to 15 per cent - to affect their profitability or market share. In the longer term it is to be hoped that these changes will help restructure industry, and lead it to become more competitive and more productive. The lower nominal corporate tax rates should encourage increased foreign investment in Australia.

5.41 The committee considers that the distortions which can still arise in the tax system with changes in the inflation rate remain matters of serious concern and recommends

> **that all possible means of reforming the tax system to remove or minimise the distorting effect of inflation be fully investigated.**

5.42 In addition to income taxes, other government revenue raising measures came in for criticism. The MTIA advocated the abolition in three years' time of payroll tax as part of its reform package,[45] while the Australian Mining Industry Council (AMIC) pointed out the adverse effects of 'excise on fuel and petroleum products used in manufacturing and processing industries, and the cost of transport services.'[46] Such taxes and charges can create distortions in the economy by affecting the costs of particular industry or industry sectors more than others, thus influencing investment decisions. The Victorian

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45. Evidence, p.655.
46. AMIC Submission, p.3.

Government has recognised this and provided payroll tax concessions for firms which increase exports.[47] The Treasury paper on international comparisons of business taxation commented, however, that most countries impose taxes similar to payroll tax 'generally in the form of social security levies and generally at much higher rates than those levied by the Australian States'.[48]

5.43 The capital gains tax and the dividend imputation which were introduced to remove certain biases and anomalies in the tax system, were criticised by the Management and Investment Companies Licensing Board (MICLB) for the effect of those changes on investment in venture capital funds.[49] As the MICLB pointed out, investors in this area look for capital gains rather than income from dividends. The changes in the tax system reduced the existing attractions for this kind of investment. It was proposed that consideration be given to 'not taxing the first sale of shares in an investee business' to return some of the incentive.[50]

5.44 The Management and Investment Companies Program was introduced in 1983 to attract investment into high risk enterprises with high growth and strong export possibilities. Its introduction was based on the existence of a deficiency in the capital markets. It was considered worthwhile to provide an incentive for the establishment of a venture capital market, but now much of that incentive has apparently been removed by a more general tax reform measure.

5.45 The committee considers that the venture capital market is not yet sufficiently well established to warrant so substantially eliminating the incentive previously provided, and recommends

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47. Evidence, p.412.
48. Treasury Economic Paper No. 13, p.5.
49. Evidence, p.154.
50. Evidence, p.162.

that a limited exemption from capital gains tax for a fixed time period be introduced for venture capital investment.

5.46 The May 1988 Economic Statement announced the extension of the MIC Program until July 1991 and its termination from that date. That is three years beyond the termination date recommended in the review of the Program carried out by the BIE. The committee recommends

that the development of the venture capital market be reviewed again in 1990-91 before the termination of the Program.

5.47 References were made in the evidence to the difficulties, for new or small businesses in particular, of obtaining finance. Steps taken in recent years to deregulate the financial market may not have succeeded in creating a financial system which is capable of meeting the needs of an economy requiring major restructuring. It would appear appropriate now to follow up the inquiries undertaken by the Campbell Committee and the Martin Committee in the first half of this decade to determine whether deregulation and the consequent emergence of additional banks in Australia have achieved the desired aims. The Committee recommends

that the government hold a public inquiry into the adequacy of the Australian financial system and its institutions in serving the needs of industry development and restructuring. This should include an assessment of the impact of financial deregulation and subsequent new entry into the banking and financial sectors.

5.48 Takeover activities in Australia in recent years have attracted considerable publicity. During the course of the

inquiry, certain negative effects of general speculative activity in the share market were raised as well as the implications of takeovers. The ACTU was concerned over the possible broader economic impact of the share market collapse as well as the unproductive nature of takeover raids.[51] The ACM referred to the role of takeover activity in helping increase the use of debt rather than equity finance. Increased reliance on debt, coupled with high interest rates and increased foreign borrowings, have all contributed to Australia's foreign debt problems.[52] Increased threat of takeovers was also seen as a contributing factor in a significant rise in dividend payouts,[53] reducing internal sources of finance for investment. The South Australian Government also mentioned the influence of takeovers on the cost and availability of finance.[54]

5.49 The threat of takeovers can serve useful purposes in encouraging better management or it can distract management from their principal function. Actual takeovers may result in destructive asset-stripping, they may allow economies of scale or they may result in more efficient management teams replacing less competent ones. Some takeover attempts may be purely speculative in nature, aimed at some form of 'greenmail' or gains from increases in share prices. They may contribute nothing in themselves to productive investment. The problem is how to distinguish between helpful and unhelpful takeovers and, if that is possible, what to do as a result.

5.50 One witness suggested a variety of alternative approaches.[55] The first was to remove the tax deduction of interest payments on capital borrowed for the purposes of investing in shares, options or the like. Interest payments on capital borrowed for the purpose of purchasing assets would still be deductible. The second proposal was to allow the deduction only once a certain proportion of the issued shares had been purchased - this would discourage the less serious speculation.

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51. Evidence, pp.438 & 439.
52. Evidence, p.47.
53. Ibid.
54. Evidence, pp.87 & 88.
55. Australtech Supplementary Submission No. 32.

The third proposal was to require shares to be held for a certain time period before the tax deduction would be allowed - discouraging short-term speculation. The final alternative was to introduce a tax on the proceeds of asset-stripping within a certain time period after purchase.

5.51 All of the proposals have problems associated with them. Submissions reflected the community concern, however, that speculative investment in the share and property markets feeds the boom/bust cycle; diverts funds away, in the first instance at least, from more productive forms of investment; and leads to distortions in the debt/equity balance. There was concern expressed in evidence that such speculative activity should attract the same public subsidy through the tax system as more productive undertakings. Recognising the existence of these public concerns, the committee recommends

> **that the Treasurer have the question of tax deductability in relation to share purchases examined to see whether the above proposals are practicable.**

5.52 The threat of takeover serves to compound the general problem of the relative impatience of Australian investment capital, with its emphasis on short-term returns and intense competition between fund managers to maximise short-term performance. This underlines the importance of developing and supporting institutions, such as the Australian Industry Development Corporation (AIDC), designed to compensate for this deficiency.

5.53 The AIDC has a crucial role to play in ensuring an adequate supply of funds for relatively risky, long-term investments crucial to the industry restructuring task. Therefore the committee recommends

> **that the government take steps to strengthen the aidc so that it can make an effective contribution to industry**

restructuring, including ensuring that it has a sufficiently strong capital base to participate in comparatively risky equity investments.

C.3 Foreign tax credits system

5.54 Another perceived impediment to investment, albeit Australian investment overseas, is the foreign tax credits scheme. Under this scheme Australian companies investing overseas will have to pay income tax on income earned overseas. A tax credit will be allowed for income paid to the foreign country. The May 1988 Economic Statement foreshadowed the removal of the incentive, under the existing legislation, not to remit income to Australia from certain low tax countries which will be designated. The ACM called for the repeal of the Foreign Tax Credits legislation[56] on the basis that it disadvantages Australian companies in foreign markets where their competitors pay less tax and also on the grounds that it imposes heavy compliance costs.[57]

5.55 Australian investment abroad, according to the evidence the committee received, is essential if Australia is to gain better access to overseas markets. The committee accepts that there is such a need. Indeed, Australian investment abroad has been growing rapidly in recent years - increasing by almost 250 per cent from 1984-85 to 1986-87 to $12.8 billion.[58] The danger in such a development is that investors will seek tax havens offshore to the detriment of investment in Australia.

D. Incentives

D.1 Investment allowances

5.56 One of the most direct ways of stimulating increased investment at first glance would appear to be the re-introduction of an investment allowance - that is, allowing a tax deduction

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56. Evidence, p.52.
57. ACM Supplementary Submission No.34.
58. Foreign Investment Review Board Report 1986-87, p.31.

for capital investment. The BIE, however, argued that there is no real evidence that an investment allowance leads to much increase.[59] There may be some acceleration, or bringing forward of investment plans, particularly if it is believed that the allowance will be of only temporary duration, but no substantial increase. Other objections raised by the BIE were that: the cost would be large; the definition of what kinds of capital items would attract the allowance can create biases and misallocation of resources within the manufacturing sector; capital intensive industries might be favoured over knowledge intensive industries; there may be adverse effects on employment from capital substitution for labour;[60] and in any case, it might artificially draw resources to manufacturing away from other sectors.[61]

5.57 There were several calls, however, for the re-introduction of an investment allowance targeted to particular sectors or industries and perhaps for a limited duration. The ACM recommended an investment allowance targeted at the tradeable goods sector of perhaps five years duration.[62] The ACM also claimed that such incentives were effective, producing a better response than the depreciation allowance.[63] The ACTU suggested that targeted investment allowances could discriminate on the basis of the Australian content of the equipment purchased.[64]

5.58 The Business Council of Australia,[65] the Metal Trades Industry Association,[66] and the Australian Mining Industry Council[67] all expressed some disagreement with the re-introduction of an investment allowance, either in a general or more targeted form. The fact that such an allowance inevitably distorts the allocation of resources, providing a subsidy to one area at the expense of others is a major stumbling block.

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59. Evidence, p.865.
60. Evidence, p.866.
61. Evidence, p.928.
62. Evidence, pp.52-55 and 74-76.
63. Evidence, p.72.
64. Evidence, p.448.
65. Evidence, p.380.
66. Evidence, p.682.
67. AMIC Submission, p.2.

5.59 The committee does not favour the re-introduction of a general investment allowance. The provision of particular investment incentives should only be provided if at all, after detailed study on an industry by industry basis and then only if necessary to overcome the effects of some specific market failure. Their impact on the economy as a whole should also be taken into account. In any case, investment incentives should have a clearly understood, fixed application period.

D.2 Information flow and government purchasing power

5.60 The task of reviving Australia's manufacturing industry requires a greater awareness of the opportunities available both in the domestic and the export markets. Through Austrade the Government seeks to assist Australian business in gaining overseas markets. More could be done to monitor and advise Australian companies about opportunities such as tenders being called for projects which Australian companies could undertake either singly or through a consortium. Many smaller companies do not have the capabilities to gather data about industry developments or growth opportunities, particularly in the export area.

5.61 The Victorian[68] and New South Wales Governments[69] have set up information sources within their bureaucracies, such as the Victorian Industrial Supplies Office and the NSW Research and Consultancy Bureau, to assist companies in becoming aware of large opportunities in the domestic market. There may be scope for a sharing of information at a national level through State co-operation. The ACTU suggested, for example, the extension of the Industrial Supplies Office network.[70]

5.62 Commonwealth and State co-operation in government purchasing could also assist Australian industry. Longer term tendering arrangements in government purchases would provide more

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68. Evidence, pp.420 & 421.
69. Evidence, p.129.
70. Evidence, p.447.

certainty for local producers and make them more able to compete against overseas suppliers.

E. Summary

5.63 The committee received many suggestions for policy changes to improve the level of manufacturing investment. There was universal agreement that government policies should be as predictable and as stable as possible and that unnecessary impediments should be removed. Beyond those very broad generalities there was much scope for disagreement. Differences understandably arose over the appropriate extent of government regulation and intervention in the event of market failure and also how tight fiscal restraint needs to be.

5.64 There were many calls for the corporate income tax burden to be reduced. Various means of financing that reduction were mentioned, including a broad-based consumption tax and the elimination of the accelerated depreciation allowance. The May 1988 Economic Statement went part of the way in meeting those suggestions.

5.65 A number of witnesses suggested that the Government should provide incentives, such as an investment allowances targeted to particular sectors. There was opposition as well to any form of investment incentive on the basis that this results in a distortion in the allocation of resources. One area can only be artificially advantaged at the disadvantage of some, or all, other areas.

5.66 The conclusions and recommendations of the committee concerning policy options have been extracted and appear at the beginning of the report.

D.P. BEDDALL, MP
Chairman

JULY 1988

APPENDIX I

Conduct of the Inquiry

On 7 December 1987 the Minister for Industry, Technology and Commerce requested the committee to inquire into the factors determining the level of investment in the Australian manufacturing industry and policies with potential to improve the Australian manufacturing investment performance.

The Committee advertised the inquiry nationally in major metropolitan newspapers. In addition, industry umbrella organisations, the Australian Council of Trade Unions, and Commonwealth, State and Territory Government departments and authorities with an interest in the subject matter of the inquiry were approached directly and invited to make submissions. Appendix II lists those individuals or organisations who made submissions.

Public hearings on the inquiry were held in Melbourne on 8 and 9 March 1988 and on 18 March 1988 in Canberra. Appendix III lists those who appeared as witnesses. 945 pages of evidence were taken and 15 exhibits were received. A list of exhibits received is contained at Appendix IV. Evidence taken at public hearings is available for inspection at the Committee Office of the House of Representatives and the National Library of Australia.

APPENDIX II

Submissions Received

Sub. No.	Submitted by	Date of Receipt
1.	Department of Technical and Further Education, NSW	29/1/88
2.	Strategic Manufacturing Technology Pty Ltd	1/2/88
3.	Harrison International Pty Ltd	4/2/88
4.	Australtech Business Management Services	5/2/88
5.	Aurora Tools Ltd	5/2/88
6.	Mr Stavros Stavridis	10/2/8
7.	Industry Research and Development Board	10/2/8
8.	Neal Ryan	12/2/88
9.	Standards Association of Australia	18/2/88
10.	NSW Government	18/2/88
11.	Premier of Victoria	18/2/88
12.	Southern Cross Corporation Ltd	18/2/88
13.	Business Council of Australia	8/2/88
14.	Australian Industry Development Corporation	25/2/88
15.	Regional Development Advisory Committee	26/2/88
16.	Management and Investment Companies Licensing Board	1/3/88
17.	Mr Jack K. Yancey	4/3/88

18.	SA Department of State Development & Technology	4/3/88
19.	State Electricity Commission of Victoria	4/3/88
20.	Australian Mining Industry Council	3/3/88
21.	Australian Chamber of Manufactures	7/3/88
22.	Australian Council of Trade Unions	8/3/88
23.	Gippsland Group Training Ltd	9/3/88
24.	BHP Steel International Group	10/3/88
25.	Exxon Chemical Australia Ltd	29/2/88
26.	Metal Trades Industry Association of Australia	11/3/88
27.	Australian Manufacturing Council & Industry Councils	16/3/88
28.	Bureau of Industry Economics	16/3/88
29.	Confederation of Australian Industry	24/3/88
30.	Profit from Technology	28/3/88
31.	Business Council of Australia letter of 7 April 1988 and document *New Strategies for Regulatory Reform*, February 1988	8/4/88
32.	Australtech Business Management Services - letter of 21 March 1988	24/3/88
33.	Metal Trades Industry Association document *The value to Australia of Local Manufacture* February 1984	31/3/88
34.	Australian Chamber of Manufactures, Extract on *Foreign Tax Credit System* from ACM Taxation Policy Issues Briefing Paper, March 1987	31/3/88

35. State Electricity Commission of Victoria - Discussion Paper on a Personnel Inventory and Performance Appraisal System 30/3/88

APPENDIX III

List of witnesses including date of appearance before the committee.

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8 March 1988 (pp.3-81)

ANGWIN, M.K.
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BECK, K.R.
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MELBOURNE, VIC
8 March 1988 (pp.181-218)

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8 March 1988 (pp.181-218)

APPENDIX IV

Exhibits Received

Exhibit No.	Title	Date of Receipt
1.	Management & Investment Companies Licensing Board Annual Report 1986-87	8/3/88
2.	Management & Investment Companies Program - MIC Investee Businesses by Industry Category as at 18 February 1988	8/3/88
3.	Management & Investment Companies Program - MICFACTS : January 1988	8/3/88
4.	Australian Industrial Computer Company - correspondence from J.R.G. Fraser to J. Jolley dated 18 February 1988 with attachment of Specification MET 107/D	8/3/88
5.	Australian Industrial Computer Corporation - Supporting documentation for Inquiry	8/3/88
6.	State Electricity Commission of Victoria - Overhead Projections	8/3/88
7.	State Electricity Commission of Victoria - Spare Parts Holdings A National Perspective	8/3/88
8.	Business Council of Australia - Business Council Bulletin *The Investment Response to Devaluation*, August/September 1987	9/3/88
9.	Business Council of Australia - Business Council Bulletin *Corporate Cash Flows and the Capacity to Invest*, August/September 1987	9/3/88
10.	Business Council of Australia - Business Council Bulletin *Private Investment - An Increasing Worry*, March 1987	9/3/88

11. Victorian Government - *Victoria The Next Step* 9 April 1984 9/3/88

12. Victorian Government - *Victoria Technology Statement* 1 July 1986 9/3/88

13. Victorian Government - *Victoria The Next Decade* April 1987 9/3/88

14. *An Outlook for the Australian Chemical Industry* - Marvin E. Mulligan, Chief Executive, Exxon Chemical Australia Ltd 18/3/88

15. Key Issues in Investment Decision Making - Exxon Chemical Australia Ltd 18/3/88