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COMMERCIAL RESTRICTIONS ON EXPORTING (INCLUDING FRANCHISING)

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INDUSTRY COMMISSION

27 April 1992

The Honourable J. Dawkins, M.P.
Treasurer
Parliament House
CANBERRA ACT 2600

Dear Treasurer

In accordance with Section 7 of the *Industry Commission Act 1989,* we have pleasure in submitting to you the report on Commercial Restrictions on Exploring (Including Franchising)

Yours sincerely

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Terms of Reference

I, PAUL JOHN KEATING, in pursuance of my powers under Section 7 of the Industry Commission Act 1989 hereby:

1. refer franchise agreements and other like arrangements restricting Australian exports for inquiry and report within twelve months of the date of receipt of this reference;

2. specify that the Commission identify institutional, regulatory or other arrangements subject to influence by governments in Australia which lead to inefficient resource use and advise on courses of action to remove or reduce such inefficiencies;

3. without limiting the scope of the reference, request that the Commission

   (a) identify the range and scope of franchise or other like restrictions imposed on or agreed between Australian businesses and overseas enterprises which could impede market and product development; and

   (b) assess the extent to which these restrictions or other limitations influence foreign investment in and exports from Australia.

P. J. KEATING
(Treasurer)

9 May 1991

OVERVIEW

The Commission has been asked to inquire and report on franchise agreements and similar arrangements that restrict Australian exports (see box opposite).

The restrictions arising from the arrangements under inquiry are typical of those associated with the commercial transfer of technology or other intellectual property rights, and covered by patents, copyright and trademarks. The restrictions may also arise from control exercised through equity links for reasons related to the transfer of technology or, more generally, business strategies. They may be formal or informal.

Some of the restrictions on exports are direct. For example, the restrictions applied by a parent company or a licensor of technology may allow a subsidiary firm or licensee to export only to a specified (local) market, or may prohibit any export at all. If domestic firms are permitted to export, it is often only to New Zealand and Papua New Guinea, and sometimes Asia.

Other restrictions are indirect, and may affect exporting by their adverse impact on cost competitiveness, for example by a parent company directing its subsidiary to purchase inputs from a particular source.

A paradox

Although franchise agreements and similar arrangements are mentioned as significant factors hindering Australia's export performance in some recent studies (BIE 1990, ACTU 1990, AMC 1986) and other publications referred to in this report, evidence of any problem is hard to come by. Indeed, very few submissions were provided to the Commission for this inquiry. A good deal of anecdotal evidence was received from industry associations, companies and unions 'that commercial restrictions are not considered the problem they once were'. Some organisations that might have been expected to provide a submission thought it was hardly worthwhile to do so.

Nature and incidence of restrictions

The commercial and informal character of the restrictions make it impracticable to identify their precise nature and incidence. However, as the restrictions are predominantly associated with the purchase of technical know-how and with foreign investment, the Commission inferred the potential for restrictions by looking at trends in these areas.

Purchased technical know-how, which includes licensed technology and other intellectual property, is predominantly sourced from overseas and, within this, from related firms. Over three-quarters of the value of these purchases is by the manufacturing sector. Payments for the technical know-how component of total expenditure on research and development in Australia have fallen from around 50 per cent to around 28 per cent over the last decade. This suggests that the potential for restrictions associated with the purchase of technical know-how is correspondingly declining.

The global marketplace has become increasingly competitive, with the result that multi-national enterprises are less inclined to place restraints on the capacity of their affiliates to compete. This competitive pressure has reduced, and is expected to continue to reduce, the incidence and significance of restrictions imposed by multi-national enterprises.

Influence of restrictions on efficient resource use, exports and foreign investment

All commercial restrictions on exporting have the potential to impose costs on the Australian economy. However, commercial restrictions which arise from franchise agreements and like arrangements flow from business decisions made in response to market circumstances. Whether associated with formal or informal arrangements, restrictions are an outcome of commercial decisions that govern access to technology and investment capital and are not a primary determinant of efficiency or competitiveness. Their effect on efficiency in general and exports of individual products is part of the price that has to be paid for improving the competitiveness of industry. In the case of foreign investment, restrictions may be sought by investors as an initial condition for investment in Australia.

Technological improvement can be an important means of achieving and sustaining international competitiveness, particularly in the manufacturing sector where commercial restrictions are most prevalent. It is largely a process of incrementally improving production within the firm and adapting to changes in demand. Where an industry achieves international competitiveness, it is more likely to rely on technology developed in-house, rather than purchased. Improved competitiveness, therefore, can be expected to lead to fewer restrictions on exporting.

Commercial behaviour will generally ensure that a net benefit flows from the transfer of technology. That is, in the absence of market distortions, there will be an improvement in efficiency relative to the situation before a transfer takes place. The disadvantages of restrictions are therefore more than offset by the benefits which the arrangements bring -- access to technology, foreign investment and global networking.

Where Australian businesses have the potential to compete in overseas markets, it is not generally in the interests of owners of intellectual property or parent companies to constrain that potential by applying restrictions. Furthermore, where an Australian firm becomes internationally competitive it would be in the interest of all parties to renegotiate or review restrictions.

Findings

Government intervention aimed specifically at avoiding commercial restrictions on exporting is not justified.

The transfer of technology plays an important role in achieving and maintaining competitiveness. Businesses accept some restrictions on exporting because they need access to the technology. The facts are that firms enter into these agreements for commercial reasons and the conditions are normally negotiable.

In Australia, earlier debate on this matter has been clouded by assumptions that:

- firms are somehow forced into these agreements;
- licensing agreements have overall negative impacts; and,

- export levels would rise significantly if these restrictions are removed.

The debate has centred upon the restrictions themselves, instead of the causes of uncompetitiveness. The advantages accruing from the underlying arrangements have been ignored or discounted. These advantages more than offset any disadvantages.

In Australia, governments have a role in facilitating free and fair competition. Current micro-economic reforms and legislation such as trade practices law are manifestations of this role. Any attempt to go beyond this by proscribing restrictions could be counter-productive since it is likely to depress economic growth and overall welfare. It would compromise access to technology, investment capital and global networking, factors which are all essential to the achievement of international competitiveness.

These findings accord with the position in OECD countries where the restrictions under inquiry are not an area of policy concern.

1 SCOPE AND CONDUCT OF THE INQUIRY

This inquiry is concerned with franchise agreements and other like arrangements that inhibit Australia's exports. The Commission is directed to identify the range and scope of restrictions and assess the extent to which they influence foreign investment in and exports from Australia.

The focus of this inquiry is on arrangements that inhibit Australian exports.

The commercial restrictions arising from the arrangements under inquiry are typical of those associated with the commercial transfer of technology or other intellectual property rights, and covered by patents, copyright and trademarks. The restrictions may also arise from control exercised through equity links for reasons related to the transfer of technology or, more generally, business strategies. They may be formal or informal.

The Commission has interpreted the 'range and scope of restrictions' to mean, respectively, their incidence, that is their prevalence and where they occur, and their nature, that is the form they take. In keeping with its guidelines, the Commission has assessed the effects of the restrictions in terms of their economy-wide impact.

Following receipt of the reference, the Commission visited and held discussions with industry associations, government and semi-government organisations and firms likely to have an interest in the inquiry. A list of those the Commission met is in Appendix A. An Issues Paper was released in June 1991 to outline the coverage of the inquiry and the perceived issues. A list of submissions received by the Commission is also included in Appendix A.

The Commission sought information from government departments and semi-government agencies whose activities may have some bearing on commercial restrictions. These agencies are listed in Appendix B, together with an outline of the information sought and summaries of the replies.

The Commission subsequently wrote to the Australian Council of Trade Unions, the Australian Manufacturing Council and a range of industry associations to increase the level of awareness of the inquiry and elicit participation. The organisations concerned are also listed in Appendix B.

To place Australia's experience in perspective, the Commission sought information on the extent of concern with commercial restrictions in OECD countries. This information was obtained through Australian embassies. A summary of the requested information and responses is also presented in Appendix B.

The Commission released a draft report in January 1992, and a public hearing was arranged in Sydney on 2 March 1992 to provide an opportunity for public comment on the draft. There were no participants.

2 NATURE AND INCIDENCE OF RESTRICTIONS

The potential for restrictions arising from franchise and like arrangements will vary with trends in the purchase of technical know-how and in foreign investment.

Purchased technical know-how, which includes licensed technology and other intellectual property, is predominantly sourced from overseas and, within this, from related firms. Over three-quarters of the value of these purchases is by the manufacturing sector. Payments for the technical know-how component of expenditure on research and development in Australia have fallen from around 50 per cent to around 28 per cent over the last decade.

2.1 Nature of restrictions

The commercial restrictions under consideration in this inquiry arise from arrangements such as licensing agreements for technology or other intellectual property rights, or arise from control exercised over an Australian enterprise. Table 2.1 lists examples of restrictions referred to in previous studies.

Restrictions applied by a parent company or a licensor of technology may allow a subsidiary firm or licensee to export only to a specified (local) market, or may completely prohibit exports. If domestic firms are permitted to export, it is often only to New Zealand and Papua New Guinea, and sometimes Asia.

Apart from restrictions that directly limit exporting, there can be restrictions or requirements that have the potential to raise the cost of production and affect a firm's competitiveness and possibly its ability to export. For example, the subsidiary or licensee may be required to source some inputs from a parent company even though the input may be available at lower cost within Australia.

The Trade Development Council (1983, p. 7) noted:

> Many of the export franchise agreements in Australia are long-standing and reflect the desire of Australian firms to establish themselves in the domestic market at the time they were entered into, maybe with little consideration given to export possibilities. As firms mature, export franchise limitations can become a more pressing concern.

It might also be argued that as firms mature, export franchise restrictions weaken. This issue is addressed in Chapter 3.

Table 2.1: Examples of the nature and form of restrictions

Nature	*Form of arrangement*	
	Licensing	*Ownership*
Territorial/sales restrictions Covering markets	Usually export restrictions, but domestic restrictions may apply to particular end-uses. May be required to 'sell' all resultant output to licensor (possibly at a pre-determined price), who then re-sells.	Parent company decides to serve just the Australian market from Australia.
Tied input sourcing	Licensee required to source raw materials or capital equipment from licensor.	Parents decides that it is in the corporate Interest to source raw materials from an associated enterprise.
Control on production location	Licensee required to produce in a certain area or prevented from producing in an area.	Parents decides on location on the basis of other Interests, possibly associated with another product.
Volume restrictions	Limits are set on the size of output of the licensee.	Parent decides on profit maximising quantity.
Restrictions on competing Products		Parent will not permit its affiliate to distribute or sell products make by enterprise competing With the parent.
Expiry restrictions	Restrictions on the use of technology after the agreement expires.	Not applicable unless parents is a licensee and Precents affiliate renewing a licence.
Controls over quality of output	Licensee must guarantee a minimum level of quality. Licensee may have to use personnel provided by Licensor. Restrictions on advertising, form of advertising or requirements to spend a certain amount.	Parent imposes what might be appropriate or Inappropriate marketing decisions about local preferences.

Table 2.1 (cont): Examples of the nature and form of restrictions

Nature	*Form of arrangement*	
	Licensing	*Ownership*
Restrictions on further and other technological development	Licensee required to transfer to licensor proprietary rights to improvements made to transferred technology. Obligation upon licensee to introduce unnecessary design changes and new material specifications. Acceptance of additional technology which is not needed or wanted as a condition for obtaining the desired technology. Restrictions on obtaining competing or complementary technology through other sources.	Parent decides to maintain control of research. and development
Transfer restrictions	Restrictions on the further transfer of licensed technology to other firms.	Parent seeks to hoard or control the sale of technology.
National strategic restrictions	Restrictions on the transfer of advanced technologies to specific countries (eg for defense reasons).	Parent may not be able to transfer technology to an affiliate in certain countries. Parent prohibits affiliate to export to certain countries.
Liability exemption	Requirement to exempt licensor from liability consequent upon defects in the goods produced using its technology.	

Source: Prepared by the Industry Commission from previous studies.

The Trade Practices Commission (TPC 1991, p. 9) notes that an intellectual property licence often permits a firm to engage in a commercial activity that it would otherwise be unable to do:

> Consequently, in many cases terms contained in intellectual property licences do not lessen competition or deter or prevent the licensee from competing with his licensor any more than would be the case in the absence of the licence.

The commercial and informal character of the arrangements giving rise to restrictions make it impracticable to identify their precise nature.

2.2 Incidence of restrictions

2.2.1 Previous studies and submissions

The BIE conducted a survey of senior executives in the manufacturing sector in 1990 to identify and assess the importance of impediments to exporting. The restrictions imposed by parent companies and licensing agreements were found to be of most concern in the chemicals, petroleum and coal products industries. Other studies have mentioned the telecommunications, hand-tools and medical and scientific equipment industries as having a high incidence of export restrictions. These industries tend to be characterised by rapidly changing technology or high research and development (R&D) costs.

Arndt and Sherk (1959) observed that subsidiaries are likely to have wider export franchises than non-affiliated companies under a licensing agreement. A survey by Parry and Watson (1979) found that restrictive export franchises and restrictions tied to agreements for the transfer of technology were more widespread in the case of technology licensed from non-affiliated overseas firms than affiliated firms.

The Trade Development Council study in 1983 that analysed the Department of Trade's Australian Firms Information System (AFIS) database showed a high incidence of restrictions applied to a wide range of Australia's export markets, especially in Europe, North America, Africa, South America, the Middle East and parts of Asia. It also noted (TDC 1983, p. 17) that the proportion of overseas affiliated companies subject to export franchise restrictions had fallen from the 50 per cent estimated in 1966 by the Export Development Council, to some 15 per cent in 1983.

The Commission is wary of studies which have relied upon surveys to describe the incidence of commercial restrictions on exporting. The survey results are likely to be unrepresentative because:

- There is a significant `no response' bias - that is, those not affected have less incentive to respond while those hampered by restrictions are more likely to respond.

- The licensee gaining a monopoly over a technology will tend not to reveal the situation for fear of regulation.

- Multi-national enterprises have nothing to gain by their subsidiaries revealing export limitations and may lose through government intervention.

- There is often no distinction drawn between types of restrictions or the terms and conditions associated with the transfer of technology and those due to other types of production agreements.

In a submission to the inquiry, the New South Wales Government referred to the high degree of overseas ownership (60 per cent) and the common incidence of franchise restrictions in the processed food industry. Another participant, Mr Easton, drew attention to the proportion of value-added attributable to foreign controlled enterprises in various sectors of manufacturing and, by implication, the scope for restrictions this entailed. The Metals and Engineering Workers Union referred to problems from restrictions in food processing, scientific and medical equipment, power transmission equipment, pharmaceutical and chemical industries.

Mr Crough of the Australian National University North Australia Research Unit contended that there is a significant area of restrictions arising from the operations in Australia of the major Japanese trading companies. Nonetheless, he noted that the very nature of commercial restrictions makes it almost impossible to obtain details.

2.2.2 Assessment

The informal nature of many restrictions makes it especially difficult to quantify their incidence.

A review of data derived from AUSTRADE's Australian Products and Services Information System (APSIS) for 1991 indicates that about 7 per cent of the approximately 9000 firms on the database have either franchise restrictions, market restrictions or a mix of both. Of firms with restrictions, two industry groups are prominent: chemical, petroleum and coal products; and, other machinery and equipment. These groups, respectively, accounted for 16 per cent and 49 per cent of the number of firms with restrictions. However, because inclusion in the database is voluntary and the importance of restrictions is not weighted, the data are of limited value.

The Commission also reviewed Australian Bureau of Statistics (ABS) data relating to payments for technical know-how (TKH), expenditure on R&D and foreign ownership and control. Relevant statistics are included at Appendix C.

The TKH data were used to infer the potential incidence of restrictions associated with the transfer of technology. The data were also used to assess the relative importance of the two broad types of arrangements giving rise to restrictions: technology transfer under some formal agreement to Australian firms from an independent overseas enterprise, and transfer to an Australian firm from an overseas enterprise with proprietary links, such as from a parent to a subsidiary or affiliate.

The R&D data were used to verify the significance of TKH in the acquisition and development of new technology.

In 1988-89, the latest year for which TKH data are available, 77 per cent of payments for TKH were by the manufacturing sector. Of these, 95 per cent were sourced from overseas. Moreover, 83 per cent (of the 95 per cent) involved payment to related firms. Payments to related firms as a proportion of total payments overseas have increased from 75 per cent in 1978-79.

The data suggest that three-quarters of commercial restrictions associated with TKH transfer are likely to occur in the manufacturing sector. As overseas enterprises account for almost all TKH transfers in this sector, the main source of restrictions appears to be related firms.

Over the period 1978-79 to 1988-89, the TKH component of R&D expenditure fell from 50 per cent to 28 per cent. It would appear from this that the reliance of firms in Australia on TKH purchases for access to technology has diminished proportionately.

This suggests that the potential for restrictions associated with the purchase of TKH is correspondingly becoming of less significance for the economy. This might be expected as Australian industry becomes more internationally competitive. Within this overall trend, however, the potential for restrictions arising from technology transfer among firms with proprietary links (related firms) may have increased.

ABS foreign ownership and control data were used to infer the potential incidence of restrictions associated with proprietary links in addition to those associated with technology transfer. These restrictions may arise through specific directives or company policy stemming from, for example, global marketing strategies.

For total manufacturing, some 34 per cent of production was subject to foreign control in 1986-87, the latest year for which information is available. The degree of foreign control has remained fairly constant since 1972-73. The data suggest that the potential for restrictions imposed through proprietary links has also remained reasonably constant.

The trend in recent years to more competitive international markets and an increasingly global approach of multi-national enterprises means that companies are less inclined to place restraints on the capacity of their affiliates to compete. This was noted by the Textile, Clothing and Footwear Development Authority in correspondence to the Commission.

3 INFLUENCE OF RESTRICTIONS ON EFFICIENT RESOURCE, USE EXPORTS AND FOREIGN INVESTMENT

The commercial restrictions on exports which arise from franchise and similar arrangements flow from business decisions made in response to market circumstances. Whether associated with formal or informal arrangements, they are market responses and not a primary determinant of the efficiency or competitiveness of an industry.

The Commission is asked to assess the extent to which franchise agreements and other like arrangements influence, among other things, foreign investment in and exports from Australia. In considering this issue the Commission reviewed the factors involved in achieving and sustaining efficiency and competitiveness and, within this, the particular role of technological development and its transfer. Concern about the effect on Australian industry of restrictions arising from these arrangements is not new. The ACTU, for example, noted that franchise restrictions and marketing agreements which restrict exports from Australia have been of concern since 1965 (ACTU 1990, p. 32).

3.1 Previous Australian studies

Early studies were predominantly concerned with the influence of foreign investment or ownership via subsidiaries. Some examples are: Arndt and Sherk 1959, *Export franchises of Australian owned companies with overseas affiliates; Brash 1966, American investment in Australian industry*; Hogan 1966, *British manufacturing subsidiaries in Australia and export franchises*; and Parry and Watson 1979, *Technology flows and foreign investment in the Australian manufacturing sector.*

Others were concerned with identifying the important factors influencing a firm's decision on whether to export, for example the 1970 study by Layton and Dunphy, *Summary report for the Export Development Council, on export attitudes, management practices and marketing skills.*

By the 1980s, the realisation that Australia was falling behind other OECD countries in terms of competitiveness focussed concern on Australia's export performance. Commercial restrictions on exporting received greater attention as a possible reason for Australia's poor export performance. The Trade Development Council (TDC) published a report on *Export Franchise Restrictions* in 1983. The Department of Trade (DoT) produced a follow-up report with the same title in 1986.

Common themes from these reports were that protective arrangements made it profitable for multi-national enterprises (MNEs) to set up subsidiary companies to supply the Australian market and that:

> ... in the past Australia may have relied too heavily on importing technology with its associated restraints rather than undertaking indigenous R&D. This has been a significant contributing factor in the development of an inward-looking manufacturing sector and in our past poor export performance (TDC 1983, p. 18).

The most recent studies focus upon the importance of new technology, innovation and skills development for Australia to compete in the world market. Some studies accept that Australian firms will license technology from overseas and therefore examine ways to minimise the associated costs, including those from commercial restrictions on exporting. The 1988 report by the Bureau of Industry Economics (BIE) on Importing Technology is of this type.

Previous studies addressed some of the consequences of restrictions in terms of their impact on export performance, research and development effort and, peripherally, efficient allocation of resources. Most studies prefaced their discussion with an acknowledgment of interpretation difficulties arising from participants/respondents facing different incentives to reply, depending on whether they were bound by export restrictions or not, and the nature of their relationship with the licensor of technology.

3.1.1 Influence on export performance

A number of reports suggested that restrictions on exports may be an important impediment to Australia's export capacity. From a survey in 1978, Parry and Watson concluded (1979, p. 20) that:

> A large proportion of firms in the sample licensed technology from foreign affiliates (63 per cent), of which 37 per cent had export franchise restrictions tied to the agreement. While other restrictions were less important, the restrictive export franchise appears to be of continuing importance in Australian manufacturing.

The TDC noted (1983, p. 1) that:

> Empirical data on export franchises suggests they are an important restraint on Australia's capacity to increase its export performance.

More recent reports have found that many restrictions on exporting are non-binding, that is, if the restriction were removed the firm would not increase its exports because it could not compete on price or does not wish to export anyway. Information received on industry visits supported this view.

The BIE considered that, in the majority of cases, licensing agreements that specifically prohibit or limit exports may not be binding (BIE 1988). It also noted, however, that:

> A significant minority of respondents considered that associated terms and conditions had constrained their exports (p. ix).
>
> Almost half the respondents in the Telecommunications industry, and about a third of respondents in the other two industry groups, stated that the removal of restrictions would lead to significantly increased export performance. This suggests that export franchises may be having some effect on inhibiting Australian manufacturing exports (p. 73).

The BIE (1990, p. 17) noted that with regard to non-exporting firms:

> The survey results suggest that restrictions imposed by parents and restrictions coming from licensing agreements are not as important impediments as is sometimes thought. These were cited as being very important by only 4 and 6 per cent of the respondents respectively.

Similarly, for exporting firms, only 5 per cent indicated that parent company restrictions or licensing agreements were a *very important* impediment to exporting (where the other possibilities were *moderately important or not important at all).* The BIE concluded that restrictions imposed by parents and licensing agreements appear relatively unimportant. It reported (1990, p. 20):

> Difficulties in competing on price, and the level and variability of exchange rates ... were cited as being very important by at least 78 per cent of respondents.

The TDC proposed that some commercial restrictions on exporting may have a beneficial effect on the Australian economy. It considered that the firm concerned would be protected from imports by similar export restrictions imposed on potential competitors. Once established, the firm may be able to negotiate opportunities to export in the long term (TDC 1983, p. 8).

3.1.2 Influence on efficient resource use

The effect of commercial restrictions on exporting on the efficient allocation of resources in general has not been directly addressed in previous Australian studies.

The TDC claimed that the inefficiently small size of plants and length of production runs, the propensity to import goods and services, the inability to export and reluctance to innovate in Australian industry are due, in part, to high levels of foreign ownership. They have, in addition, been encouraged by high levels of industry protection, making it profitable for owners of technology to jump the tariff barrier and establish a subsidiary rather than license the technology to an Australian firm (TDC 1983, p. 12).

Some studies have noted that MNEs make production decisions on the basis of global cost minimisation (for example, TDC 1983). This means that production decisions of Australian affiliates that maximise profit for the MNE may not be best for the Australian affiliate in isolation or for the Australian economy.

The BIE (1988) noted it is rational behaviour for a licensor of technology to divide the relevant market (often the world) into a number of areas and restrict licensees from selling outside their area. This has the effect of creating spatial monopolies and increasing the profits earned from the technology.

The specific effect of commercial restrictions on R&D, however, can be inferred from the relationship between imported technology and R&D.

Parry and Watson (1979) considered that importing technology can encourage Australian R&D because of the need to adapt that technology to suit local production conditions or techniques. It has also been claimed that mere exposure to this technology can increase our knowledge and innovative ideas. The purchaser of technology would presumably also need to conduct some research to be able to assess which technology to buy.

On the other hand, importing technology can discourage domestic R&D. Where a firm buys a final product embodying technology, it may reduce its investment in research. Where imported technology comes with associated restrictions that either ban further development or make any developments of the technology the property of the licensor, there is little incentive for the licensee to improve the technology.

The BIE's survey showed that there was an inverse relationship between the extent industries rely on imported technology and the level of local R&D they conduct. However, the BIE noted (1988, p. x) that it:

> ... did not appear to be due to controls imposed by technology suppliers which deter local R&D. Rather, this result appeared to reflect the different technology strategies of firms. Firms generally appeared either to base local production on imported technology, requiring relatively low research levels for adaptation, or on their own technology requiring high levels of more innovative R&D.

The BIE also noted that a reduction in the level of technology transfer would not necessarily result in an increase in domestic firms' R&D because many firms appear to be unable to generate a substitute for the technology they import.

A study by Braga and Willmore (1991) points out that the relationship between technological imports and local R&D can involve both substitution and complementarity. The authors note, however, that evidence from Europe (Blumenthal 1978), Japan (Odagiri 1983 and Ozawa 1985) and India (Katrak 1985, Lall 1983 and Siddharthan 1988), as well as their own study for Brazil, suggests that the complementarity relationship strongly dominates that of substitution.

3.1.3 Why previous studies have not resolved the issue

The issue of the effect of commercial restrictions on exporting has not been resolved despite numerous studies and inquiries. There are a number of reasons for this.

The debate in relation to commercial restrictions on exporting has been clouded by assumptions that:

- firms are somehow forced into these agreements and that the conditions are not competitively determined nor negotiable;
- licensing agreements have overall negative impacts for Australia; and,
- export levels would rise significantly if these restrictions are removed.

The debate about the influence of restrictions has centred upon the restrictions themselves, without due consideration of the advantages accruing from the underlying arrangements. Moreover, the commercial and informal character of restrictions has made collection of useful data difficult.

Concerns about Australia's poor export performance in comparison with other OECD countries, and the perceived loss of national autonomy associated with the growing presence of MNEs in the economy, have focussed attention on commercial restrictions on exporting. However, of greater significance are the underlying causes of uncompetitiveness.

3.2 The Commission's assessment

The Commission reviewed the literature on patents, copyright and other intellectual property to identify whether restrictions attached to transfer arrangements have been the subject of empirical studies. There is considerable literature on R&D and the adoption of new technology. However, much of the analysis of the welfare implications of these economic activities takes as given that owners will exploit their property rights to maximise their returns and, therefore, assume the arrangements will be beneficial overall.

The underlying reason why firms enter into these agreements is to gain access to technology. However, the restrictions which accompany the agreements bring their own advantages and disadvantages. The Commission has attempted to identify some of these in relation to efficiency and export competitiveness. The advantages and disadvantages at the firm, industry and economy-wide level are listed in Table 3.1.

Table 3.1: Some potential advantages and disadvantages of commercial restrictions associated with the transfer of technology (a)

Category	*Firm*		*Industry*		*Economy*
	Advantages	*Disadvantages*	*Advantages*	*Disadvantages*	*Disadvantages*
Tied input sourcing	Guarantee of supply or Quality. Lower costs from strategic links developed with MNEs.	Reduced allocative efficiency if price does not reflect value of input and the technology transferred.	Reduced overall inventory costs. Efficiencies of greater complementary	Economies of vertical integration are lost. Stifles innovation along production chain.	Import of goods where Australian may have comparative advantage.
Controls on production location	Reduced transport costs. from complementarity with transport arrangements	Increased location cost and wages. Increased transport costs.	Efficiency gains from having industries clustered together.	Inefficiency from not having associated Industries clustered together.	Unrealised export potential. Inefficient location of Production bases.
Volume restrictions	Restricts output and increases price, and possibly returns.	May preclude economies of scale. Increased production costs.		Unable to produce at profit maximising level. Loss of efficiency affecting skill formation and entrepreneurship.	Inefficient level of production. May induce imports and may reduce exports.
Territorial restrictions	Firm usually has a monopoly. in its region	Unable to export even if competitive. Restricts market for output. Removes efficiency discipline of competition.		Distorts decisions to produce offshore.	Unrealised export Potential. Reduced competition in a region. Distortions in transport.
Reduces free-rider competing products	Can not produce competition for licensor.	Loss of competition rigour. Import of goods where products. Prevents economies of scope Being exploited.			Australia may have comparative advantage. Loss of consumer choice

Table 3.1 (cont): Some potential advantages and disadvantages of commercial restrictions associated with the transfer of technology (a)

Category	*Firm*		*Industry*		*Economy*
	Advantages	*Disadvantages*	*Advantages*	*Disadvantages*	*Disadvantages*
Restrictions on further and other technological development	Ensures product uniformity, allowing mass marketing. Dependence on licensor maintained. Unable to adopt technology to local environment.	Unable to fully exploit innovative improvements		Stifles innovations	Lower R&D and less innovation.
Controls over quality of Output	Benefits of quality reputation.	Increased costs. Induced competition via production of a lower grade product.	Builds consumer confidence and demand.	Stifles innovation.	Unsatisfied demand for Lower limitations on access to the technology.
Transfer restrictions		Can not fully exploit technology.	Access to technology not otherwise available,		Lower competition from the limitations on access to the technology.
National strategic restrictions		Decreases potential market, possibly effecting economies of scales			Less exports. Possible trade war.
Expiry restrictions		May discourage the adoption of new technology.		Decreases the number of producers over time by extending patent monopolies beyond their legal time and scope.	

a. The underlying advantage of technology transfer is the economic benefits that flow from its acquisition, to the firm and the economy as a whole.

Source: Prepared by the Industry Commission.

3.2.1 Determinants of economic efficiency

Commercial restrictions on exporting have the potential to affect economic efficiency and export competitiveness. However, as other factors can be far more influential, any assessment of the effects of commercial restrictions must have regard to those broader determinants of efficiency and export competitiveness.

Government policies can have a significant bearing on the achievement of efficiency. They affect, for example, the rate of capital formation, public infrastructure, labour costs and incentives. Governments, from time to time, adjust macro-economic settings to stabilise economic conditions and to provide an economic climate in which, amongst other things, investment in new technology takes place efficiently.

Competition is one of the most important determinants of efficiency. The incentives provided by competition ensure that firms strive to meet the demands of the market and develop new products in response to changes in taste. Competition provides the constant pressure to produce at least cost, to innovate and gain a competitive advantage through, amongst other things, superior technology. However, because factor endowments differ from location to location, the choice of technology should be conditioned by the economic and market circumstances faced by an enterprise.

The existence of competitive markets is not always sufficient to ensure that investment in R&D occurs at a socially optimal rate, that is, market forces may fail to achieve an economically efficient outcome. Possible reasons for under-investment in R&D include the presence of benefits not taken into account in investment decisions.

Governments sometimes intervene in situations where market failure is thought to occur. Laws on patents, copyright and trademarks and investment incentives for R&D are examples. Patent and copyright laws are intended to overcome the problems of market failure by allocating property rights. They also provide incentives and safeguards for the development and commercial transfer of technology. Where these laws are considered to provide inadequate incentives, governments may support research with development grants and taxation deductions.

Innovation and technological development

A country's success in particular industries can be traced to technological superiority, innovation and higher-quality products.

Porter (1990) concludes that industries achieve international competitive advantage largely through innovation. Innovation comes not only from the exploitation of new technology, but also in the adaptation and development of existing technology:

> Firms create competitive advantage by perceiving or discovering new and better ways to compete in an industry and bringing them to market, which is ultimately an act of innovation. Innovation here is defined broadly, to include both improvements in technology and better methods or ways of doing things. It can be manifested in product changes, process changes, new approaches to marketing, new forms of distribution, and new

> conceptions of scope. Innovators not only respond to possibilities for change, but force it to proceed faster. Much innovation, in practice, is rather mundane and incremental rather than radical. It depends more on a cumulation of small insights and advances than on major technological breakthroughs. It often involves ideas that are not "new" but have never been vigorously pursued. It results from organizational learning as much as from formal R&D. It always involves investment in developing skills and knowledge, and usually in physical assets and marketing effort (p. 45).

A study of the role of technological change in Australian economic performance (Eleck, Camilleri and Lester 1987) supports the view that achieving and sustaining international competitiveness is largely a process of incrementally improving production within the firm and adapting to changes in demand. Product differentiation derived from innovation also appears to be an important determinant of international competitiveness.

Production of substitutes to imported goods is frequently the first stage in the process of manufacturing development. In order to achieve this level of competitiveness, technology is often imported under license. Even so, a complementary technology base within the country is needed to make best use of imported technology (Rosenberg 1982, pp. 272-73 and Braga and Willmore 1991). Some R&D must also occur to adapt products and improve production processes, even in cases where imported capital items embody technology.

The local development of technology incorporating incremental improvements is often an important factor enabling industries to achieve and maintain international competitiveness, especially in the manufacturing sector where commercial restrictions are most prevalent. The local development of technology often complements a favourable factor endowment. As local firms undertake more of this R&D they become less reliant on imported technology. In turn, the incidence of restrictions associated with technology transfer could be expected to decrease.

Although research plays a significant role, it is technological development that is often most relevant to commercial success. This development is predominantly incremental and related to the development of processes rather than products.

Technology was not seen as a critical factor in achieving economic growth and competitiveness in the past. Technology development was assumed to occur naturally, developing at an appropriate rate if the economy is working efficiently. The models used to represent economic growth implied that countries with the same preferences and technology will converge to identical levels of per capita income with trade and factor mobility accelerating this convergence.

Transfer arrangements

Despite the importance of indigenous R&D, the transfer of technology plays an important role in achieving and maintaining productive efficiency. Businesses need to have access to and be able to make appropriate use of available technology. For some, this may mean transferring technology via licensing, from a parent to an affiliate or between joint venture partners.

The price paid for licensed technology frequently contains an up-front payment, some form of royalty on goods produced and compliance with certain restrictions on the use of technology or

sales of resultant goods. The ratio of the three components can change, depending on the nature of the technology. The degree of restriction can, to some extent, be traded-off with the up-front price or royalty, but the increase in price necessary to encourage the licensor to sell technology without export restrictions could be prohibitive.

The technology concerned can vary from a radical to an incremental improvement. It may be incorporated in a new product or a process that reduces production costs. In the case of radical developments, the owner may prefer to enter into an agreement with a manufacturer to develop or use existing complementary technology in order to produce a new product. In the case of a product incorporating an improvement on existing technology, a licence may be issued that restricts the markets that the product can be sold into. Where the technology is a minor input, a licence may be issued without any restrictions on where the product is sold.

A presence in the market can affect the type of transfer arrangements. An enterprise that has to enter an industry to exploit its technology faces the costs of market research and the establishment of distribution arrangements. A preferred option may be to form a joint venture with a firm that has knowledge of the market, or simply license its technology.

Technology transfer increasingly involves an exchange between companies rather than a one-way flow. In these circumstances, there is less scope within the transfer arrangements for the imposition of conditions such as export restraints.

Government industry policy and regulation can influence the type of transfer arrangements, as can the enforcement of copyright and patent laws. For example, if an overseas firm believes that its intellectual property is not protected adequately by indigenous laws, the firm may prefer to transfer the technology to affiliates or a joint venture partner in order to keep its technology secret.

Networking

The Australian Manufacturing Council (AMC) has drawn attention to the importance of networking as a strategy to increase the international competitiveness of Australian enterprises. The AMC considers that networking has a crucial role in encouraging the diffusion of new ideas and technologies (AMC 1991). The benefits come from sharing of information, ideas and knowledge, development of closer working relations with suppliers and, for small firms, the realisation of scale economies.

Networking is a feature of technology development and innovation overseas, particularly in Japan. The linkages provided by networking overcome not only the scale problems associated with research, but facilitate diffusion. Diffusion increases the likelihood of the exploitation of developments in the country of their origin and hastens the adoption of new products and processes.

Networking, if it proves to be a successful strategy, will increase the level of adoption of Australian research and, as a corollary, reduce the incidence of commercial restrictions and their impact on the competitiveness of export industries.

Foreign investment

Restrictions on exporting that arise through the equity holdings of overseas investors or joint venture participation may be associated with technology transfer, but can occur for other reasons such as global marketing strategies. These restrictions generally represent normal commercial behaviour of foreign investors in protecting their proprietary interests and maximising returns on their investment.

These restrictions may be seen as an initial condition for some foreign investment in Australia and, therefore, to attracting foreign investment. Much of this investment would not occur if Australian industry were not competitive. Technology transferred under franchise and like arrangements, despite associated restrictions, contributes to achieving and sustaining competitiveness.

Foreign equity investment is an important source of capital. Some 29 per cent of the value of companies on the Australian Stock Exchange is overseas owned (IC 1991, pp. 120-21). Foreign ownership is of major importance for access to technology and the dissemination or transfer of it by MNEs (Parry 1988, p. 360, Chesnais 1988, p. 500 and p. 506). The same holds true for participation in Australian enterprises by overseas joint venture partners.

Foreign ownership links (including joint ventures) are also a means of accessing marketing experience and strengths. This was emphasised to the Commission in discussions with ICI Australia Ltd and Commonwealth Serum Laboratories Limited.

In contrast to the notion of MNEs seeking to restrict access to certain technologies, there is evidence that they are usually driven by market disciplines to share, trade or sell their technology to ensure its broad acceptance in the market place.

3.2.2 Discussion

Influence of restrictions on efficiency and exporting

The restrictions under inquiry flow from business decisions made in response to market circumstances. They are, therefore, influenced by factors that have a bearing on economic efficiency and export competitiveness. Viewed within that broad framework, their effect on efficiency in general and exports of individual products is part of the price that has to be paid for improving the competitiveness of industry.

The disadvantages associated with commercial restrictions would not prevent efficiency gains where profit maximising firms take account of the offsetting advantages, including the benefits of

equity capital, know-how and access to technology. Moreover, Australian firms can frequently renegotiate agreements where these would otherwise prevent exports.

Restrictions applying to the transfer of technology arise because of a desire to maximise returns on intellectual property. Generally, this will take the form of maximising the benefits of the monopoly position provided for by patent laws and copyright.

Some restrictions associated with the transfer of technology may have the effect of lessening competition. Examples of such arrangements are restrictions on access to markets and the tied requirement to obtain goods and services not protected by the intellectual property rights, either from the parent or from another affiliated enterprise. Where enterprises gain market power from the lessening of competition, the efficiency gains from utilising new technology may be further eroded by the firm producing below socially optimal levels in order to maximise profits. In such cases, there may not be a net efficiency gain after taking both the restrictions and the constraint on competition. However, the Trade Practices Commission (TPC) has publicly presented the view that there are few circumstances where restrictions would be in contravention of *the Trade Practices Act* (TPC 1991). An example is the requirement to obtain goods and services not protected by the intellectual property rights, either from the parent or from another affiliated enterprise.

Although the licensing restrictions do not generally contravene the *Trade Practices Act*, the efficiency gains from utilising new technology may be eroded by the firm producing below socially optimal levels of output in order to maximise profits where enterprises gain market power from the lessening of competition. However, the TPC argues that in many cases licensed access to technology will have a positive effect on competition and generally benefit the economy. The TPC accepts that certain restrictions in licences may be acceptable (in order to encourage the licensing of new technology) if the alternative is that no licence be granted (TPC 1991, p. 9).

Restrictions in the form of directives by enterprises with proprietary links to Australian firms (such as MNEs and their affiliates) may be a response to distortions in overseas markets. For example, production location decisions may be influenced by the existence of a plant built overseas because of government investment incentives. In such cases, the overseas government incentive should be regarded as the impediment to efficient resource use. Where overseas governments assist R&D, they are in effect also assisting Australian manufacturers if the technology developed is transferred to Australia at a price lower than would otherwise occur.

Another source of distortion may be anomalies in taxation regimes. MNEs may impose restrictions that provide for transferring profits to countries with the most favourable tax regime. The Australian Taxation Office has been introducing arrangements to minimise the gains from this practice.

Enterprises do not accept or, in the case of parent companies, impose restrictions unless they expect to achieve at least a normal rate of return on their investment. For example, an Australian manufacturer would enter into a licensing agreement with restrictions only with the expectation of being competitive at least in the Australian market. Under these circumstances, the transfer of technology together with the restrictions will normally produce a more efficient use of resources than without the technology.

Restrictions that limit export market destinations have been a specific concern in the past. However, the restrictions (which normally apply to complete products) are likely to impede exports in only a limited number of cases.

Where Australia is competitive in the production and export of a product under license, it is likely to be in the owner's interest to license the technology with the most efficient producer and not to stand in the way of exports.

This view is consistent with comments made to the Commission that most of the restrictions limiting access to export markets are just a reflection of competitiveness. If the companies concerned could achieve international competitiveness, then access to wider export markets should be achieved.

The Commission concludes that restrictions are at worst a minor impediment to exporting and arise from contractual arrangements that improve efficiency and export competitiveness.

Influence of restrictions on foreign investment

Australian businesses must be competitive in order to attract investment, including foreign investment. Access to technology is one of many factors that contribute to achieving and sustaining competitiveness. Consequently, restrictions associated with the transfer of technology are part of the process of achieving competitiveness and foreign investment.

Restrictions may be sought by foreign investors as an initial condition for their investment in Australia. In these cases, restrictions are a consequence of the arrangements and not a determining influence on foreign investment.

The Commission concludes that restrictions, on balance, do not inhibit foreign investment.

4 IS THERE A ROLE FOR GOVERNMENT?

The Commission agrees with the BIE (1988, p. ix) that:

> While some overseas owned companies in Australia may benefit if their parent companies placed fewer restrictions on the technology they provide, tighter foreign investment policies do not seem to be a suitable means of pursuing these benefits. ... The concern that tighter controls on investment could inhibit the free flow of technology from overseas appears to have been borne out by overseas experience.

Surveys of overseas technology suppliers documented by the BIE (1988) show that they would be reluctant to transfer technology to countries that prevent them from nominating where resultant products could be sold. Australian manufacturers were also opposed to government interference, believing controls would make it more difficult and costly to purchase technology from foreign companies.

4.1 Conclusions of previous studies

Almost all those who have conducted relevant research caution against increased regulation by governments to counter commercial restrictions on exporting.

For example, the TDC (TDC 1983, p. 8) found that:

> Export franchises are a means by which Australian firms obtain access to technology and production techniques arising from overseas research. This has enabled important new industries to be established in Australia, although their ultimate growth is dependent on the relaxation of export restraints. The alternative may be that the Australian market would be supplied by imports and Australian industry would lack incentive and motivation.

The BIE (1988, p. xi) concluded that the problem of export franchises is likely to be addressed more effectively by improved negotiation than by regulations which may well be counter-productive:

> While some problems may exist in terms of information deficiencies and the effects of export franchises, the BIE concludes that major new government initiatives in these areas would be unlikely to be cost effective.

Many strategies have been proposed to lessen the impact of restrictions.

The TDC found that there was scope for export restrictions to be lessened by negotiation and saw a role for government in encouraging firms to renegotiate agreements. The Department of Trade (DoT 1986) agreed and proposed to pursue the matter on a case-by-case basis.

The TDC proposed strengthening Australian R&D to stem the growth of export franchise restrictions. An up-grade of the Export Market Development Grants Scheme was also suggested as a counter-balance to further growth of restrictions.

'Product mandating' was put forward by the TDC as a possible means whereby governments could encourage MNEs to restructure their operations to manufacture particular products in Australia in which we may have a comparative advantage. Rather than a MNE producing a range of goods in each national market, for that market, they could specialise in various countries and export the products around the world.

The Department of Trade proposed that restrictions on exporting might be best combated by the Foreign Investment Review Board (FIRB) 'fast-tracking' approval for new foreign investment proposals that clearly satisfy trade criteria. It was suggested that the fast-tracking could be used as an inducement for firms to not place restrictions on the transfer of technology (DoT 1986).

The following initiatives were influenced by perceived problems arising from commercial restrictions.

Foreign Investment Review Board

Consideration of export franchise restrictions was added to the criteria used by the FIRB when assessing foreign investment proposals following the TDC's 1983 inquiry.

Current policy tests are more liberal. In its response to the Commission's request for information for this inquiry, the FIRB noted:

> There is now no requirement to address the issue of commercial restrictions on exports in the course of formulating our advice under the current policy. The July 1986 liberalisation of policy removed the economic benefits test in respect of proposals falling within most sectors, including manufacturing, so that proposals are expected to be approved unless they were contrary to the national interest.

Australian Products and Services Information System

AUSTRADE upgraded its AFIS register of Australian companies. The new register, APSIS, includes information on the products, services, exporting activities and interests of some 9000 firms. The system contains information regarding any franchise arrangements or overseas affiliates the companies may have. A number of previous studies have used information in the system as a primary source of data.

150 per cent tax concession for R&D

The Industry Research and Development Board (IRDB) was established in 1986 to administer the 150 per cent tax concession for R&D jointly with the Australian Taxation Office. Under its enabling legislation, the Board is required to ensure that the technology developed in R&D projects for which the tax concession is received is exploited for the benefit of the Australian economy.

The tax concession is aimed at encouraging Australian R&D. Where this results in a substitute for imported R&D, it can reduce the flow of technology from overseas and thus lessen the effect of associated restrictions.

The IRDB (1990, p. 2) does not view 'umbrella technology agreements', which provide overseas companies transferring technology to Australian companies free access to technology subsequently derived from that acquired technology, as exploitation of R&D to the benefit of Australia. By disallowing the tax concession in these situations, the IRDB provides an incentive for overseas companies not to place restrictions on the further development of technology by the Australian companies. It does this to ensure that technology involved in these R&D projects and its development is retained in Australia.

In a reply to a Commission request for information, the Board noted the issue of exploitation has been raised with several applicants and this has resulted in negotiations to comply with the legislation. With regard to restrictions on access to overseas markets, the IRDB stated:

> It is the Board's view that exploitation is to the benefit of Australia when the results of the technology development are made available ... with no restrictions on market access ... .

The Board noted that whether a project is exploited for the benefit of Australia is considered on a project-by-project basis.

4.2 Inquiry participants' views

Mr Easton called for government intervention to curb the level of foreign control on the ground that overseas control brings a loss of autonomy which is not in Australia's best interest.

The New South Wales Government stated in its submission that, given the nature of informal restrictions (largely non-visible and most likely commercial contracts) and the need for equity investment, restraints would be costly to apply and probably ineffective.

> There is little that Governments in Australia can do beyond continuing to exert pressure on those companies that do not have strict formal arrangements with their affiliate, to change their production or marketing arrangements (sub. 1, p. 2).

The Metals and Engineering Workers Union argued that franchise restrictions and their potential impact should be taken into account by government when:

- devising guidelines for industry assistance arrangements and the eligibility of companies to participate; and,
- considering foreign investment proposals submitted to the FIRB.

4.3 Overseas initiatives

Canada

In the 1960s and early 1970s, Canada's growing balance of payments deficit and the vast proportion of Canadian manufacturing undertaken by US affiliates generated concerns about the effect on domestic R&D of restrictions attached to technology imports. In response, Canada established the Foreign Investment Review Agency (FIRA) in 1973 to encourage new investors to reduce restrictions attached to technology. The FIRA also encouraged MNEs to establish world product mandates, specialising production and research of a different product or range in each affiliate's country.

The Australian Department of Trade (1986) documented a change in Canadian attitude towards foreign investment in 1985, and referred to the establishment of Investment Canada to replace the FIRA. Canada realised that stringent foreign investment rules failed to address the basic reasons for the poor industrial performance and invited retaliation. The range of new investments and acquisitions reviewed by Investment Canada was substantially narrowed as a consequence.

A study prepared for the Economic Council of Canada (McFetridge 1989) lends support to a more benign approach to foreign investment. Conducted within an overall aim of understanding how the Canadian economy reacts to changes in international competition:

> The study results suggest that Canadian and foreign-owned firms often respond to the pressures for change in much the same way. Where differences do arise, however, the presence of foreign-owned firms appears to enhance, rather than diminish, the ability of the Canadian manufacturing sector to adjust to the pressures for change (McFetridge 1989, p. vii).

Andean Group countries

A significant attempt at regulating technology licensing was undertaken in 1971 by the Andean Group countries (comprising Bolivia, Colombia, Ecuador, Peru and Venezuela). National regulatory agencies were established to review and approve technology licences. Certain practices were specifically prohibited from licence agreements, including: tied input sourcing, volume restrictions, grant-back provisions, payments for unused patents and prohibitions on use of competing technologies.

A number of studies have shown that while the Andean Group's actions increased the proportion of local ownership in foreign affiliates and reduced profit remittances, it also resulted in a significant decline in the growth rate of foreign investment in the region (Barton, Dellenbach and Kuruk 1988). The Andean Group countries have subsequently relaxed their technology guidelines (Marton and Singh 1991, p. 203).

Other developing countries

The study by Marton and Singh (1991) reviewed government initiatives in a range of developing countries. The study revealed that while regulatory policies on foreign technology can improve the bargaining position and the terms and conditions of contracts for the transfer of technology, in most cases they also act as disincentives to the inflow of technology and foreign direct investment. The authors noted (1991, p. 203) that where such policies have been either abolished or substantially relaxed, there has been a significant increase in the transfer of technology. Where such policies have remained, they have continued to exert a negative impact on the transfer of technology and foreign direct investment.

OECD countries

The Commission sent cables to Australian embassies in most OECD countries to determine whether commercial restrictions on exporting are an issue of policy concern. The responses suggest that commercial restrictions are not currently an issue and nor are they likely to be in the foreseeable future.

This may be related to the more open market being developed in the European Economic Community, where general pro-competition rules apply.

In Japan, the Fair Trade Commission takes action on patent and know-how licensing agreements insofar as they influence competition within the domestic market. Restrictions affecting export markets are not of concern.

4.4 The Commission's assessment

The Commission has not identified any institutional, regulatory or other arrangements subject to influence by governments in Australia that (in relation to the commercial restrictions under inquiry) lead to inefficient resource use. Governments can assist, however, by removing impediments to efficient market operations. They can also minimise the incidence of restrictions by ensuring that indigenous R&D is undertaken at an appropriate rate. The role of government should be to ensure that the incentives to undertake R&D are appropriate and neutral.

Attempts to tighten controls on foreign investment could inhibit the free flow of technology from overseas. Although some MNEs might be induced to part with their technology on less restrictive terms, these gains are likely to be outweighed by a reduction in investment levels and access to technology. Moreover, should transfers continue, companies can be expected to pay a higher price in lieu of the restrictions they are able to remove.

Governments in Australia are pursuing a wide-reaching micro-economic reform agenda aimed at the removal of inefficiencies and other impediments to efficient market operations. This is the

appropriate way in which to ensure that any adverse effects of commercial restrictions are minimised.

The experience overseas has been that where governments intervene, access to technology and the rate of foreign investment is adversely affected. In view of the importance of access to technology, investment capital and global networking to the achievement of international competitiveness, the Commission considers that any attempt to proscribe restrictions is likely to be counter-productive. It may make Australia worse off by jeopardising these essential inputs to the achievement of international competitiveness.

Government intervention aimed specifically at avoiding commercial restrictions on exporting is not justified.

APPENDIX A: SUBMISSIONS AND VISITS

Submissions were received from:

- New South Wales Government
- Metals and Engineering Workers Union
- Mr K Easton
- Central Station Records and Tapes Pty Ltd
- Australian National University North Australia Research Unit

The Commission visited and held discussions with the following organisations:

Canberra

AUSTRADE

Australian Mining Industry Council

Bureau of Industry Economics

Metal Trades Industry Association of Australia

Trade Practices Commission

Melbourne

AeroSpace Technologies of Australia Pty Ltd

Arthur Andersen & Company

Chemical Confederation of Australia

Commonwealth Serum Laboratories Limited

ICI Australia Ltd

Newtronics Pty Ltd

Sydney

Metals and Engineering Workers Union

GEC Australia Ltd

Thorn-EMI (Australia) Ltd

APPENDIX B: LETTERS AND CABLES SEEKING INFORMATION

The Commission wrote to government and semi-government agencies to inquire whether commercial restrictions were considered in the policy deliberations that led to their establishment or considered in the course of their activities, and if so, the effect upon their decision-making.

Industry associations were contacted for information about the range and incidence of restrictions, and to publicise the inquiry.

Cables were sent to Australian embassies in most OECD countries seeking information on the extent of policy concern about commercial restrictions.

B.1 Letters to government agencies

The responses of each of the agencies are summarised below.

Department of Industry, Technology and Commerce (DITAC)
Light Industry Division (the area responsible for the offsets and Partnerships for Development programs)

DITAC stated that it has no reason to believe formal commercial restrictions are a significant restraint on trade. Nor is it an issue specifically addressed in its current industry programs.

The department accepts that companies may choose to buy technology with restrictions because, generally, this entails a lower price and the restrictions will not unduly inhibit their plans. DITAC views technology as a normal commercial product, bought and sold under conditions similar to any other product.

Foreign Investment Review Board

The FIRB confirmed that commercial restrictions arising from franchising were considered in the policy deliberations that led to its establishment. However, liberalisation of policy in 1986 removed an economic benefit test. Now, proposals are approved unless they are contrary to the national interest. Under existing policy, the question of export franchises seldom arises when assessing whether a foreign investment proposal is contrary to the national interest.

Australian Industry Development Corporation

Commercial restrictions from franchise and like arrangements were not a consideration in the policy deliberations that led to the establishment of the Corporation. However, through dealings of

Interscan, a wholly-owned subsidiary of the Corporation which develops and manufactures high-technology air navigation aids, the Corporation recognises that arrangements should be considered in commercial dealings between companies.

The Corporation considers that it is important not to inhibit the transfer of technology to Australia. For this reason, based on its limited experience in these matters, the Corporation stated that there should be no government interference with restrictions imposed by the owners of technology upon Australian licensees.

Automotive Industry Authority

Commercial restrictions were considered in deliberations having regard to government policy and are still considered relevant. Restrictions are considered in the course of the activities of the Authority and policies are recommended to overcome these restrictions.

The Authority believes it has a role to persuade corporate decision makers to remove these restrictions.

Industry Research and Development Board

The Industry Research and Development Board and the Australian Taxation Office jointly administer the Government's 150 per cent tax concession for R&D. The Board's enabling legislation requires that it should ensure that the results of R&D projects for which the tax concession is received are exploited for the benefit of the Australian economy. In view of the Government's industry policy objectives, the Board pays considerable attention to this aspect in its deliberations.

Pharmaceutical Benefits Pricing Authority

The Authority manages the 'Factor f' industry development program. The program seeks to encourage the development of an export oriented research based industry in Australia. Many companies operating in Australia have been able to develop export markets in competition with other suppliers, often subsidiaries of their own parent company located in different regions, on the basis of price increases approved under the program.

The Authority considers that price and other factors such as quality and reliability of supply, and not commercial or franchise arrangements, are the significant factors if Australian pharmaceutical companies are to develop export markets. Patent protection and recognition, and extension of patent life for pharmaceuticals from 16 to 20 years, has also encouraged local R&D and improved opportunities for Australian companies to manufacture and export under license.

Textiles, Clothing and Footwear Development Authority

Commercial restrictions on exporters arising from franchising and limitations on subsidiary activities of overseas-based companies have been a consideration of government policy in the textiles, clothing and footwear industries.

During the period of its operation, the Authority has noted considerable change in the scope afforded to some companies by their parent companies. Australian-based subsidiaries, either at their own instigation or with parental urging, have started to re-focus their marketing horizons beyond Australia.

The stimulus for this change of direction can be attributed to two main factors. First, declining protection for the Australian textiles, clothing and footwear industries means companies have to respond by either finding new markets, becoming more competitive, or closing. Second, changes in the management philosophy of large multi-national enterprises, whereby there is a movement away from centre-controlled organisations (commonly based in the United Kingdom, Europe and the United States) to more autonomous units with greater freedom to compete or develop complementarity with related company units.

The Authority sees these changes as positive and seeks to encourage investment and marketing decisions which will move further along these lines. As a provider of financial assistance to textiles, clothing and footwear companies, the Authority has some leverage in ensuring that companies operate without 'artificial' restrictions.

B.2 Letter to industry associations, the ACTU and the AMC

The normal procedures for publicising the Commission's inquiry resulted in a very limited response. Accordingly, the Commission sent a letter publicising the inquiry and outlining likely issues, and an article for possible inclusion in in-house publications to the following industry associations:

Australian Chamber of Commerce

Australian Chamber of Manufactures

Australian Chamber of Manufactures (New South Wales Division)

Australian Federation for Medical and Biological Engineering

Australian Hardware Manufacturers Association

Australian Information Industry Association Ltd

Australian Manufacturers Export Council

Australian Mines and Metals Association Inc

Australian Mining Industry Council

Australian Pharmaceutical Manufacturers Association

Canberra Chamber of Commerce Inc

Chamber of Commerce and Industry South Australia

Chemical Importers and Exporters Council of Australia Ltd

Construction & Mining Equipment Association of Australia

Federal Chamber of Automotive Industries

Federation of Australian Scientific and Technological Societies Inc

Food Industry Council of Australia

Food Technology Association of Tasmania

Hobart Chamber of Commerce Inc

Institute of Drug Technology Australia Ltd

Institute of Metals and Materials Australasia Limited

Metal Trades Industry Association of Australia

Northern Territory Confederation of Industry and Commerce Inc

Printing and Allied Trades Employers Federation of Australia

Proprietary Medicines Association of Australia Inc

Pulp and Paper Manufacturers Federation of Australia Ltd

Queensland Confederation of Industry Ltd

Rubber Manufacturers Association of Australasia

Software and Services Industry Federation of Australia Limited

State Chamber of Commerce and Industry (Queensland)

State Chamber of Commerce and Industry (Victoria)

Tasmanian Confederation of Industries

Victorian Automobile Chamber of Commerce

Western Australian Chamber of Commerce and Industry

The Commission also wrote to the ACTU and the AMC, informing them of the inquiry. The ACTU subsequently canvassed interest amongst its affiliates.

As a result of these efforts, the inquiry received wide publicity. Interest in the inquiry, however, remained minimal.

B.3 Cables to OECD countries

Cables were sent to Australian embassies in most OECD countries seeking answers to the following questions:

- whether commercial restrictions were an issue of current policy concern in the country;
- if they were, what was the nature of concern and what was being done to address this;
- if they were not, have such restrictions been a problem in the past; and,
- if restrictions were a problem in the past, but are no longer, what government initiatives or altered market circumstances caused the change.

Information in the responses indicated that commercial restrictions on exports are not of policy concern at present and nor are they likely to be in the foreseeable future.

The responses revealed two points of related interest. For countries in the European Economic Community, many of the commercial restrictions under inquiry which may affect trade between member states are limited under general competition rules. These are covered under Articles 85 (1) and 85 (3) and Article 86 of the Treaty of Rome. In Japan, the Fair Trade Commission takes action on patent and technical know-how licensing agreements, but only insofar as they influence competition within the domestic market.

APPENDIX C: STATISTICAL DATA

C.1 Introduction

The Terms of Reference ask the Commission to '... identify the range and scope of franchise and other like restrictions imposed on or agreed between Australian businesses and overseas enterprises which could impede market and product development'.

As these restrictions primarily relate to the transfer of technology, Australian Bureau of Statistics (ABS) data for expenditure on Technical Know-How (TKH) was used to indicate the likely incidence of restrictions. As these restrictions also arise where an overseas enterprise has proprietary links with an Australian firm, the Commission has referred to ABS data on foreign control and ownership.

Research and development (R&D) statistics were used to verify the significance of TKH in the acquisition and development of new technology, and its usefulness as an indicator. The data demonstrate the significance of TKH as a proportion of total R&D expenditure.

The TKH data were used to examine the incidence and relative importance of Australian and foreign sourced TKH, and to show the relative importance of sourcing from related and independent firms within the manufacturing sector.

The foreign control and ownership data are useful in highlighting the importance, within the manufacturing sector, of the proprietary links between foreign and Australian enterprises and the relative importance of these arrangements as a potential source of commercial restrictions.

C.2 Findings

C.2.1 Technical know-how and research and development

Data in Table C.1 show the manufacturing sector accounted for 76.6 per cent of total expenditure in TKH by all industries in 1988-89. This proportion has varied from a low of about 73 per cent in 1978-79 to a high of about 90 per cent in 1984-85. A reasonable inference from this is that commercial restrictions arising from franchise and like arrangements are likely to be similarly concentrated in the manufacturing sector.

The extent of payments made overseas for TKH, and the proportion going to related firms is indicated in Table C.2. For the manufacturing sector in total, payments made overseas for TKH

represented about 95 per cent of total expenditure on TKH in 1988-89. Over the period 1978-79 to 1988-89, the proportion of total expenditure on TKH paid overseas for TKH was consistently high, averaging about 96 per cent (Table C.1).

A significant proportion of the payments abroad for TKH has gone to related firms. For the period 1978-79 to 1988-89, the proportion of payments overseas to related firms increased from around 75 per cent to about 84 per cent (Table C.1).

Within the manufacturing sector, the industries which are prominent in terms of expenditure on TKH include chemical, petroleum and coal products (26.2 per cent), transport equipment (19.3 per cent), appliances and electrical equipment (13.4 per cent) and food, beverages and tobacco (10.3 per cent). See Table C.2.

As a proportion of total expenditure on R&D, TKH has declined from some 50 per cent in 1978-79 to 28 per cent in 1988-89 (Table C.1). This suggests that the scope for restrictions associated with the purchase of TKH from overseas has become proportionately less significant for the Australian economy.

C.2.2 Foreign control and ownership

As shown in Table C.3, 34 per cent of total production turnover by the manufacturing sector was attributed to foreign control in 1986-87. The industries with high levels of foreign control include, chemical, petroleum and coal products (68.7 per cent), transport equipment (60.2 per cent), basic metal products (41.8 per cent), and other machinery equipment (37.1 per cent).

The extent of foreign control in R&D within the manufacturing industry is presented in Table C.4. The industries with high levels of foreign control include transport equipment (79.8 per cent), chemical, petroleum and coal products (65.8 per cent), textiles, clothing and footwear (59.7 per cent), food, beverages and tobacco (44.3 per cent), and, within other machinery equipment, appliances and electrical equipment (37.5 per cent).

C.3 Limitations of the data

The degree of data aggregation is a major limitation. Information on TKH and R&D can only be disaggregated to the 2 digit ASIC subdivision. Data on foreign ownership and control for industries within manufacturing can be disaggregated to the 4 digit ASIC subdivision.

Another limitation is the availability of recent data. The latest information on TKH and R&D is for 1988-89. The latest information for foreign control in the manufacturing sector is for 1986-87.

Table C.1: **Payments by business enterprises for Technical Know-How in manufacturing industries, 1978-79 to 1988-89**
(per cent)

	Year				
	1978-79	*1981-82*	*1984-85*	*1986-87*	*1988-89*
Payments as proportion of total R&D expenditure	50.3	47.4	33.0	34.4	28.2
Payments overseas as proportion of total payments	98.3	97.8	97.9	90.7	95.3
Payments overseas to related firms as a proportion of all payments overseas	74.6	74.1	73.6	78.8	83.5
Manufacturing payments as a proportion of total payments	73.0	78.8	89.0	85.1	76.6

Source: ABS Catalogue No. 8104.0

Table C.2: Payments by business enterprises for Technical Know-How in manufacturing industries, 1988-89

Industry	*ASIC Code*	*Value of production*	*Total TKH payments*			*Payments to overseas for TKH*			*Industry expenditure on R&D*	*Payments for TKH as a proportion of industry expenditure on R&D*
			Value	*Proportion of total TKH*	*Proportion of value of production*	*Value*	*Proportion of industry TKH Payments*	*Proportion of TKH payments to related firms*		
		($million)	*($million)*	*(per cent)*	*(per cent)*	*($million)*	*(per cent)*	*(per cent)*	*($million)*	*(per cent)*
Food, beverages & tobacco	21	30704	26.7	10.3	0.09	26.3	98.8	96.0a	82.7	32.2
Textiles, clothing & footwear	22-24	9268	np	np	np	np	np	np	7.8	np
Wood, wood products & furniture	25	7897	1.6	0.6	0.02	np	np	np	9.8	16.7
Paper, paper products, printing & publishing	26	13367	np	np	np	np	np	np	24.1	np
Chemical, petroleum & coal products	27	13848	67.8	26.2	0.49	63.9	94.3	87.0	148.0	45.8
Non-metallic mineral products	28	7268	7.8	3.0	0.11	7.5	95.4	11.2	22.3	35.2
Basic metal products	29	19408	23.8	9.2	0.12	np	np	np	91.7	26.0
Fabricated metal products	31	11989	8.6	3.3	0.07	8.3	96.9	np	25.7	33.3

Table C.2: Payments by business enterprises for Technical Know-How in manufacturing industries, 1988-89

Industry	*ASIC Code*	*Value of production*	*Total TKH payments*			*Payments to overseas for TKH*			*Industry expenditure on R&D*	*Payments for TKH as a proportion of industry expenditure on R&D*
			Value	*Proportion of total TKH*	*Proportion of value of production*	*Value*	*Proportion of industry TKH Payments*	*Proportion of TKH payments to related firms*		
		($million)	*($million)*	*(per cent)*	*(per cent)*	*($million)*	*(per cent)*	*(per cent)*	*($million)*	*(per cent)*
Transport equipment	32	14771	49.8	19.3	0.34	48.0	96.4	94.4	159.6	31.2
Other machinery & equipment	33	15191	47.5	18.4	0.31	np	91.3b	75.0b	320.7	14.8
Photographic, professional & scientific equipment	334	1056	3.1	1.2	0.30	np	np	np	37.5	8.4
Appliances & electrical Equipment	335	8473	34.8	13.4	0.41	33.6	96.6	72.8	228.3	15.2
Industrial machinery & equipment	336	5661	9.6	3.7	0.17	8.3	85.7	83.1	54.9	17.5
Miscellaneous manufacturing	34	8141	15.2	5.9	0.19	14.1	92.9	np	26.1	58.2
Total Manufacturing		151856	258.7	100.0	0.17	246.5	95.3	83.5	918.5	28.2
Total Other Industries			79.2			67.2	84.8	65.5	819.9	9.7
Total All Industries			337.9			313.7	92.9	79.6	1738.5	19.4

np Not published
a. Food, beverages & tobacco data are for 1986-87
b. Commission estimate
Source: ABS catalogues No. 8104.0 and No. 8203.0

Table C.3: Foreign ownership and control in manufacturing industries, 1986-87

Industry	*ASIC Code*	*Value of production turnover*	*Foreign ownership a*		*Foreign control b*	
			No. of firms	*Proportion of production turnover*	*No. of firms*	*Proportion of production turnover*
		($million)		*(per cent)*		*(per cent)*
Food, beverages & tobacco	21	24747	6893	27.9	7730	31.2
Textiles	23	3412	690	20.2	698	20.4
Clothing & footwear	24	4269	318	7.5	224	5.2
Wood, wood products & furniture	25	5533	587	10.0	613	10.5
Paper, paper products, printing & publishing	26	10401	1497	14.4	2314	22.3
Chemical, petroleum & coal products	27	11278	6831	60.6	7744	68.7
Non-metallic mineral products	28	5379	1012	18.8	673	12.5
Basic metal products	29	14230	5415	38.5	5877	41.8
Fabricated metal products	31	8464	1241	14.7	1092	12.9
Transport equipment	32	10983	6467	58.9	6617	60.2
Other machinery & equipment	33	11566	4576	39.6	4293	37.1
Miscellaneous manufacturing	34	6121	1711	28.0	1779	29.1
Total Manufacturing		104408	37238	32.0	39654	34.0

a. Foreign ownership is measured in terms of the beneficial equity interests of foreign residents. It includes direct foreign ownership of 25 per cent or more of ordinary shares or voting stock.
b. An enterprise is classified to foreign control if it is connected to a foreign resident by an ownership link of 25 per cent or more of voting shares, and there is no equal or greater link from an Australian source.

Source: ABS Catalogue No. 5322.0

Table C.4: Research and development expenditure in manufacturing industries, 1986-87

Industry	*ASIC Cod*	*R&D expenditure*						*R&D expenditure as a proportion of production turnover*	
		Australian control a		*Non-Australian control*		*All*	*Proportion of total R&D expenditure*		
		Value ($million)	*Proportion b (per cent)*	*Value ($million)*	*Proportion b (per cent)*	*Value ($million)*	*(per cent)*	*Australian control a (per cent)*	*Non-Aust. control (per cent)*
Food, beverages & tobacco	21	30.6	55.7	24.4	44.3	55.0	8.0	0.12	0.10
Textiles, clothing & footwear	23-24	5.2	40.3	7.7	59.7	13.0	1.9	0.07	0.10
Wood, wood products & furniture	25	np	np	np	np	6.3	0.9	np	np
Paper, paper products, printing & publishing	26	8.2	87.4	1.2	12.6	9.4	1.4	0.08	0.01
Chemical, petroleum & coal products	27	40.7	34.2	78.3	65.8	119.0	17.3	0.36	0.69
Non-metallic mineral products	28	9.7	65.3	5.2	34.7	14.9	2.2	0.18	0.10
Basic metal products	29	50.7	78.6	13.8	21.4	64.5	9.4	0.36	0.10
Fabricated metal products	31	19.2	89.1	2.3	10.9	21.5	3.1	0.23	0.03
Transport equipment	32	25.7	20.2	101.2	79.8	127.0	18.5	0.23	0.92

Table C.4 (cont) : Research and development expenditure in manufacturing industries, 1986-87

Industry	*ASIC Cod*	*R&D expenditure*						*R&D expenditure as a proportion of production turnover*	
		Australian control a		*Non-Australian control*		*All*	*Proportion of total R&D expenditure*		
		Value ($million)	*Proportion b (per cent)*	*Value ($million)*	*Proportion b (per cent)*	*Value ($million)*	*(per cent)*	*Australian control a (per cent)*	*Non-Aust. control (per cent)*
Other machinery & equipment	33								
Photographic, professional & scientific equipment	334	np	np	np	np	25.3	3.7	np	np
Appliances & electrical equipment	335	107.7	62.5	64.7	37.5	172.4	25.1	1.70	1.02
Industrial machinery & equipment	336	35.9	85.6	6.0	14.4	42.0	6.1	0.82	0.14
Miscellaneous manufacturing	34	12.0	75.6	3.9	24.4	15.9	2.3	0.20	0.06
Total Manufacturing		367.8	53.6	318.0	46.4	685.9	100.0	0.35	0.30

np Not published
a. Foreign ownership is measured in terms of the beneficial equity interests of foreign residents. It includes direct foreign ownership of 25 per cent for more of ordinary shares or voting stock.
b. Proportion of R&D expenditure within each industry.
Source: ABS Catalogues No. 5330.0 and No. 8203.0

ABBREVIATIONS

ABS	Australian Bureau of Statistics
ACTU	Australian Council of Trade Unions
AFIS	Australian Firms Information System
AMC	Australian Manufacturing Council
APSIS	Australian Products and Service Information System
ASIC	Australian Standard Industrial Classification
AUSTRADE	Australian Trade Commission
BIE	Bureau of Industry Economics
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DITAC	Department of Industry, Technology and Commerce
DoT	Department of Trade
FIRA	Foreign Investment Review Agency
FIRB	Foreign Investment Review Board
IC	Industry Commission
IRDB	Industry Research and Development Board
MNE	Multi-national Enterprise
OECD	Organisation for Economic Co-operation and Development
R&D	Research and Development
TDC	Trade Development Council
TKH	Technical Know-How
TPC	Trade Practices Commission

GLOSSARY

Copyright	Statutory protection given to a literary (including computer software), musical, artistic or dramatic work and certain other subject matters such as sound recordings, cinematograph films, television broadcasts, sound broadcasts and published editions of works.
Economic efficiency	The production of the best or optimal combination of outputs by means of the most efficient combination of inputs. Economic efficiency is achieved when it is not possible to change the existing resource allocation in such a way that someone is made better off and no one worse off. The efficient combination of inputs is that which produces output at the least opportunity cost.
Franchise agreements	Agreements comprising of licences of intellectual property rights relating to trade marks or signs and know-how, which can be combined with restrictions relating to supply or purchase of goods. Distribution franchises which relate to the sale of goods, and service franchises relating to the supply of services, fall outside the scope of this inquiry.
Intellectual property	A property right, conferred by law, which grants some form of exclusivity over the manufacture, use or sale of a product, process, label or packaging. It is represented in the form of patents, copyright, registered designs, registered and unregistered trade marks, and confidential information.
Networking	The conscious building of relations between firms, their customers, suppliers, and research institutions as a means of enhancing external relations in order to improve the competitive capabilities of firms.
Productive efficiency	Occurs when inputs produce a given level of output at the least possible cost.
Technical know-how	Specialised technical knowledge required to successfully produce a product or implement a process that increases technical knowledge and understanding.

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